

The Engineering Forum of the UDEM School of Engineering and Technologies

# IEOM

## 6th North American Industrial Engineering and Operations Management Conference

Monterrey,  
Mexico

November 3-5, 2021

organizers



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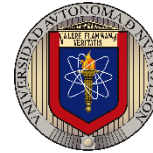
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IEOM Society  
"Achieving and Sustaining Operational Excellence"  
www.ieomsociety.org

**Industrial Engineering and Operations Management Society International**

IEOM Society International, 21415 Civic Center Dr., Suite 217, Southfield, Michigan 48076, USA

Phone: 1-248-450-5660, Email: info@ieomsociety.org

# Welcome to the 6th North American Conference on Industrial Engineering and Operations Management, Monterrey, México

To All Conference Attendees:

On behalf of the IEOM Society International, we would like to welcome you to the **6th North American Conference on Industrial Engineering and Operations Management**, November 3-5, 2021 in conjoint with **the UDEM's Engineering Forum**. The host of this event is the School of Engineering and Technologies of the University of Monterrey (UEM). In addition, it has important co-organizers such as UDEM's Business School, School of Accounting and Management (FACPYA) from Autonomous University of Nuevo León (UANL), Tecnológico de Monterrey, Automotive Cluster of Nuevo León (CLAUT), and Latin American Network of Research in Energy and Vehicles (RELIEVE). This unique international conference provides a forum for academics, researchers and practitioners from many industries to exchange ideas and share recent developments in the fields of industrial engineering and operations management. This diverse international event provides an opportunity to collaborate and advance the theory and practice of major trends in industrial engineering and operations management. There were more than 600 papers/abstracts submitted from 53 countries, and after a thorough peer review process, 450 have been accepted for presentation and publication.

The conference program includes many cutting-edge topics of industrial engineering and operations management as well as plenty of other topics related with state of the art in engineering and technologies, business management with a special approach in automotive industry. The theme of the conference is "New World, Renewed Engineering". This conference will address many of the issues concerning continuous improvement based on megatrends in business and industrial digitalization. Our keynote speakers will address some of these issues:

1. Dr. Jose Ignacio Huertas. Professor of the Mechanical Engineering Department at Tecnológico de Monterrey, Mexico
2. Dr. Manuel Montoya. General Director of the Automotive Cluster of Nuevo León, A.C. Monterrey, México
3. Dr. Michele Roccotelli. Department of Electrical and Information Engineering, Polytechnic University of Bari, Italy
4. Dr. Patrick Dallasega. Assistant Professor of Factory Planning and Project Management at the Faculty of Science and Technology of the Free University of Bolzano, Italy
5. Dr. José Arturo Garza-Reyes. Professor of Operations Management. Head of the Centre for Supply Chain Improvement College of Business, Law and Social Sciences University of Derby, UK
6. M.S. Eduardo Caballero Terrazas. Customer Experience Manager at Logrand Entertainment Group. Monterrey, México
7. M.S. Alberto de Icaza is the Head of External Affairs at ZF Group, Mexico
8. Dr. Eric Ayanegui. Director Operations Engineering at Cintas Corporation. Houston, Texas, USA
9. Dr. David Pistrui. Director, Graduate Recruiting Clinical Professor of Engineering College of Engineering & Science University of Detroit Mercy. Detroit, Michigan, USA
10. Franco Omar Ramos Langer. Channel Technical and Business Enablement Manager, Siemens Digital Industries Software, Digital Software Division, Querétaro, Mexico
11. Dr. Benito Flores Juárez. Dean of the School of Engineering and Technologies at the University of Monterrey.
12. Dr. Josep Miquel Piqué President of Technova Barcelona – La Salle Innovation Park. Manager of Internationalization and Innovation – La Salle URL, Spain
13. M.S. Marco Antonio Vildoso Flores. Secretary for Advance FIT Engineering Studies, San Sebastian University, Santiago, Chile
14. Dr. Natalia Navarrete. Chassis Technologies for EVs - Manager. Commercial Vehicles, Metalsa. Monterrey, México
15. Frank Nagorschel. Director Marketing and Talent Solution, Crystal System Group Ltd, Cyprus

The 27th IEOM Society Global Engineering Education session will feature distinguished speakers who will discuss the workforce readiness and engineering education challenges and opportunities. The 26<sup>th</sup> Industry Solutions and Industry 4.0 will showcase major topics including IoT, AI, data analytics, iCloud, cybersecurity, automation, digital manufacturing, MSV, lean six sigma including industry best practices. 6<sup>th</sup> IEOM Global Supply Chain & Logistics focuses on the current challenges of supply chain due to the global pandemic. Plenary speakers will deliver talks on various cutting-edge topics. Five panel sessions have been planned: successful projects of industrial solutions developed by students, reinventing the local automotive Industry towards electro mobility, entrepreneurship education, women in industry and academia and diversity & inclusion sponsored by Ford Motor Company.

The IEOM Society would like to express our deep appreciation to our sponsors, universities partners, organization partners, exhibitors, authors, reviewers, keynote speakers, panelists, track chairs, advisors, the local committee, UDEM's student branches and the many volunteers who have given so much of their time and talent to make this unique international conference an overwhelming successful event. UDEM, conference host, welcome all participants.

The IEOM Society Conference Planning Committee hopes you will enjoy Monterrey, México conference. Lastly, our sincere best wishes to you all for a successful conference.



**Dr. Luz María Valdez-de la Rosa**  
CONFERENCE CHAIR  
Associate Professor  
School of Engineering and Technologies  
University of Monterrey  
Monterrey, Nuevo Leon, Mexico



**Dr. José Benito Flores-Juárez**  
HONORARY CHAIR  
Dean of School of Engineering and  
Technologies  
University of Monterrey  
Monterrey, Nuevo Leon, Mexico



**Dr. Ahad Ali**  
CONFERENCE CO-CHAIR  
Associate Professor and Director of  
Industrial Engineering Programs,  
Lawrence Technological University,  
Southfield, Michigan, USA

## Conference Program

### November 3, 2021 (Wednesday)

6:00 – 8:00 am Parallel Sessions Online - Breakout Rooms 5-9  
 8:00 - 8:30 am Welcome Address: Prof. José Benito Flores Juárez, Director de la División de Ingeniería y Tecnologías, Universidad De Monterrey, Mexico and Past President – American Society for Quality - Ballroom  
 8:30 - 9:15 am Keynote I (Opening Keynote): Dr. José Ignacio Huertas, Professor, School of Engineering and Sciences, Energy and Climate Change Research Group, Instituto Tecnológico y Estudios Superiores de Monterrey, Campus Monterrey, Nuevo León, Mexico - Smart Mobility and Smart Cities  
 9:15 - 10:00 am Keynote II: Dr. Manuel Montoya, General Director of the Automotive Cluster of Nuevo León (CLAUT) - Ballroom  
 10:00 - 10:15 am Break  
 10:15 - 11:00 am Keynote III: Michele Roccotelli, Assistant Professor, Politécnico de Bari - Ballroom  
 11:00 - 11:45 am Keynote IV: Dr. Patrick Dallasega, Professor, Free University of Bozen-Bolzano, Italy  
 11:45 - 12:30 am Keynote V: Eduardo Caballero Terrazas, Customer Experience Manager, Logrand Entertainment Group - Ballroom  
 12:30 - 1:00 pm Lunch Break

1:00 - 2:45 pm Plenary - Cintermex Ballroom 1a  
 1:00 - 2:45 pm Panel 1 - Cintermex Ballroom 1b  
 1:00 - 2:45 pm Parallel Sessions Onsite - Breakout Rooms 1-4  
 1:00 - 2:45 pm Parallel Sessions Online - Breakout Rooms 5-9

3:00 - 4:45 pm Plenary - Cintermex Ballroom 1a  
 3:00 - 4:45 pm Panel 2 - Cintermex Ballroom 1b  
 3:00 - 4:45 pm Parallel Sessions Onsite - Breakout Rooms 1-4  
 3:00 - 4:45 pm Parallel Sessions Online - Breakout Rooms 5-9

5:00 - 6:45 pm Parallel Sessions Online - Breakout Rooms 5-9  
 7:00 - 8:45 pm Parallel Sessions Online - Breakout Rooms 5-9  
 9:00 - 11:45 pm Parallel Sessions Online - Breakout Rooms 5-9

### November 4, 2021 (Thursday)

6:00 – 8:00 am Parallel Sessions Online - Breakout Rooms 5-9  
 8:15 - 8:30 am Welcome Address: Autonomous University of Nuevo Leon and The Automotive Cluster of Nuevo León (CLAUT) - Ballroom  
 8:30 - 9:15 am Keynote VI: Alberto de Icaza, Head of External Affairs, ZF Group Mexico – Ballroom  
 9:15 - 10:00 am Keynote VII: Eric Ayanegui, CPMM, CRL, Director Operations Engineering, Cintas Corporation, Houston, Texas, USA – Ballroom  
 10:00 – 10:15 am Break  
 10:00 - 11:00 am Keynote VIII: David Pistru, Ph.D., Industry Liaison, Director, Graduate Recruiting, Clinical Professor of Engineering, College of Engineering & Science, University of Detroit Mercy, Detroit, Michigan, USA – Ballroom  
 11:00 - 11:45 am Keynote IV: Prof. Jose Arturo Garza-Reyes, Professor of Operations Management, Head of the Centre for Supply Chain Improvement, College of Business, Law and Social Sciences, University of Derby, UK – Ballroom  
 11:45 am - 12:30 pm Keynote X: Franco Omar Ramos Langer, Channel Technical and Business Enablement Manager, Siemens Digital Industries Software, Digital Software Division, Querétaro, Mx – Ballroom  
 12:30 - 1:00 pm Lunch Break

1:00 - 2:45 pm Plenary - Cintermex Ballroom 1a  
 1:00 - 2:45 pm Panel 3 - Cintermex Ballroom 1b  
 1:00 - 2:45 pm Parallel Sessions Onsite - Breakout Rooms 1-4  
 1:00 - 2:45 pm Parallel Sessions Online - Breakout Rooms 5-9

3:00 - 4:45 pm Plenary - Cintermex Ballroom 1a  
 3:00 - 4:45 pm Panel 4 - Cintermex Ballroom 1b  
 3:00 - 4:45 pm Parallel Sessions Onsite - Breakout Rooms 1-4  
 3:00 - 4:45 pm Parallel Sessions Online - Breakout Rooms 5-9

5:00 - 6:45 pm Parallel Sessions Online - Breakout Rooms 5-9  
 7:00 - 8:45 pm Parallel Sessions Online - Breakout Rooms 5-9  
 9:00 - 10:45 pm Parallel Sessions Online - Breakout Rooms 5-9

### November 5, 2021 (Friday)

6:00 – 8:00 am Parallel Sessions Online - Breakout Rooms 5-9  
 8:15 - 8:30 am Welcome Address: Tecnológico de Monterrey and RELIEVE (Latin American Network of Energy Efficiency in Vehicles)  
 8:30 - 9:15 am Keynote XI: Prof. José Benito Flores Juárez, Director de la División de Ingeniería y Tecnologías, Universidad De Monterrey, Mexico and Past President of American Society for Quality - Ballroom  
 9:15 - 10:00 am Keynote XII: Dr. Josep Miquel Piqué Huerta, HVAC at Carrier, President of Technova Barcelona – La Salle Innovation Park, Manager of Internationalization and Innovation – La Salle URL, Barcelona, España - Ballroom  
 10:00 – 10:15 am Break  
 10:15 - 11:00 am Keynote XIII: Marco Antonio Vildoso Flores, Secretary for Advance FIT Engineering Studies, San Sebastian University - Ballroom  
 11:00 - 11:45 am Keynote XIV: Dra. Natalia Navarrete. Chassis Technologies for EVs - Manager – Commercial Vehicles - Ballroom  
 11:45 am - 12:30 am Keynote XV: Frank Nagorschel. Director of Talent Solutions, Crystal System Group, Limassol, Cyprus - Ballroom  
 12:30 - 1:00 pm Lunch Break

1:00 - 2:45 pm Plenary - Cintermex Ballroom 1a  
 1:00 - 2:45 pm Panel 5 - Cintermex Ballroom 1b  
 1:00 - 2:45 pm Parallel Sessions Onsite - Breakout Rooms 1-4  
 1:00 - 2:45 pm Parallel Sessions Online - Breakout Rooms 5-9

3:00 - 4:45 pm Plenary - Cintermex Ballroom 1a  
 3:00 - 4:45 pm Panel 5 - Cintermex Ballroom 1b  
 3:00 - 4:45 Parallel Sessions Onsite - Breakout Rooms 1-4  
 3:00 - 4:45 Parallel Sessions Online - Breakout Rooms 5-9

**7:00 – 10:00 pm, November 5, Friday CONFERENCE AWARDS DINNER - Cintermex Ballroom**



# Keynote Speakers

## November 3, 2021 (Wednesday)

8:00 - 8:30 am, Wednesday, November 3: **Welcome Address** – Onsite at Cintermex Ballroom



### **Dr. Jose Benito Flores-Juarez**

Dean of Engineering and Technologies School

University of Monterrey, México

Past President – American Society for Quality

Dr. Benito Flores is an industrial engineer with a master's degree in engineering and a doctorate in educational administration. He has been a university professor for more than 20 years and has taught at seven universities. He is currently Director of the Engineering Division of the University of Monterrey. He has won two national awards for his studies related to demanding and student success. In 2007 he received the Roberto Garza Sada Promagistro Award, the highest recognition given by the UDEM to its teachers. He currently serves on the Council of Nonprofit Organizations such as the American Society for Quality -Global, the Southern Association of Colleges and Schools, and the Santa Catarina Polytechnic High School.

8:30 - 9:15 am, Wednesday, November 3: **Keynote I** – Onsite at Cintermex Ballroom



### **Dr. José Ignacio Huertas**

Professor, Escuela de Ingeniería y Ciencias

Energy and Climate Change Research Group

Instituto Tecnológico y Estudios Superiores de Monterrey

Campus Monterrey

Nuevo León, Mexico

#### ***Smart Mobility and Smart Cities***

Dr. Jose Ignacio Huertas is a Full time professor of the Mechanical Engineering Department at Tecnológico de Monterrey. Researcher of the Energy and Climate Change Research Group. He belongs to the Mexican System of researchers (SNI) level 2, and to the Mexican Academy of Science. He has published 3 books, more than 50 indexed papers, has 2 patents conferred, has graduated 8 PhD and 89 MSc students and has completed more than 90 research projects financed by private companies and governmental institutions in Colombia, Mexico, Spain, France, and USA. His areas of interest are energy, combustion, vehicular emissions, air pollution and sustainable mobility.

9:15 - 10:00 am, Wednesday, November 3: **Keynote II** – Onsite at Cintermex Ballroom



### **Dr. Manuel Montoya**

General Director of the Automotive Cluster of Nuevo León (CLAUT)

#### ***Changes in the Automotive Industry***

Manuel Montoya Ortega has more than thirty years of international experience in the areas of Strategic Planning and Business Plan Development; As well as in the Creation, Development and Structure of Clusters in diverse sectors and regions of Mexico.

He holds a PHD in Administration from the Universidad Autonoma de Queretaro, a Master's in Business Administration from the Instituto de Estudios Superiores de la Empresa, IESE, Barcelona, Spain and a Chemical Engineer degree from the Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Monterrey. He also has a specialization in: Business Management DI by the Instituto Panamericano de Alta Dirección de Empresas (IPADE) and Total Quality Management Program, Tata Research Center, Pune, India.

Manuel Montoya is President of the Automotive Industry Clusters Network of Mexico, General Director of the Automotive Cluster of Nuevo León, A.C. and Founding Partner of ENE Estructuras de Negocios, S.C. Previously, he has collaborated in managerial positions for various companies and organizations in Mexico and abroad, including: Inmobiliaria Seival (Project Director and General Director), Pan American Institute of Senior Management of Companies IPADE (Director of Senior Management Programs), Ficosa International and Tata Ficosa Private Limited (Technical Vice President and Board member in Pune, India).

10:00 – 10:15 am Break

10:15 - 11:00 am, Wednesday, November 3: **Keynote III** – Onsite at Cintermex Ballroom



**Michele Roccotelli**

Assistant Professor, Department of Electric and Information Engineering  
Faculty of Engineering, Politecnico di Bari, Bari, Italy

***Smart Cities and Electromobility***

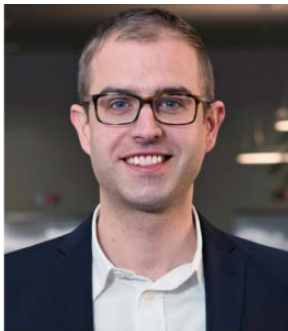
Michele Roccotelli received the MEng degree in Automation Engineering from the Polytechnic of Bari in 2010. He received the Ph.D. in Electrical and Information Engineering from the Polytechnic of Bari, Italy (Apr. 2016). He has been a visiting scholar (Jan. 2015-Jul. 2015) at the École Normale Supérieure de Cachan, Paris, France. He is currently an Assistant professor at Polytechnic of Bari, at the Department of Electrical and Information Engineering. His research interests include energy efficiency systems, models and strategies for smart grids and smart buildings, electric mobility systems and services. Dr Roccotelli has been member of the

program committees of several international conferences such as IEEE SOLI 2017, IEEE CoDIT 2019-2020, IFAC Wodes 2020 and in the organizing committee of the IEEE SMC 2019 and he is reviewer of IEEE, Wiley and MDPI journals.

Dr. Roccotelli has been/is involved in the following H2020 EU funded research and innovation projects in the electromobility field: 1) NeMo – HyperNetwork for electromobility (RIA, 2016-2019, 2) ELVITEN - Electrified L-category Vehicles Integrated into Transport and Electricity Networks (IA, 2017-2020); 3) "eCharge4Drivers - Electric Vehicle Charging Infrastructure for improved User Experience" (RIA, 2020-2023).

His industry experience includes an internship at AVIO Spa (May 2011-Oct. 2011) as test engineer of electromagnetic machines for high frequency applications on aircrafts and an internship at BAUTECH Srl (Feb. 2012-Sep. 2012) as building automation technologies and software developer.

11:00 - 11:45 am, Wednesday, November 3: **Keynote IV** – Onsite at Cintermex Ballroom



**Dr.-Ing. Patrick Dallasega**

Assistant Professor, Industrial Engineering and Automation  
Faculty of Science and Technology  
Free University of Bozen-Bolzano, Bozen-Bolzano, Italy

***The Interconnection between Lean Management and Industry 4.0 concepts and technologies***

Patrick Dallasega is an Assistant Professor (tenure track) of Factory Planning and Project Management at the Faculty of Science and Technology of the Free University of Bolzano (Italy). He studied at the Polytechnic University of Turin (Italy) and got his PhD at the University of Stuttgart (Germany). He was Visiting Scholar at the Excellence Centre in Logistics and Supply Chain Management Chiang Mai University (Thailand) and at the Worcester Polytechnic Institute in Massachusetts (USA). He is author as well as co-author of 59 scientific publications indexed in the Scopus database with an overall H-index of 19 and around 1000 citations. Furthermore, in 2019 he received

the IEOM Young Researcher Award in recognition and appreciation of outstanding achievement in research and publication, dedication, support and service in Industrial Engineering and Operations Management. In 2018 he received the National Scientific Habilitation (Abilitazione Scientifica Nazionale) as Associate Professor in Industrial Engineering (sector 09/B2 ING-IND/17 Impianti Industriali Meccanici)..

11:45 am - 12:30 pm, Wednesday, November 3: **Keynote V** – Onsite at Cintermex Ballroom



**Eduardo Caballero Terrazas**

Omnichannel and Customer Experience Manager  
Logrand Entertainment Group  
Monterrey, México

***Make it happen, digital transformation, customer experience and data-driven***

Eduardo Caballero, born in Monterrey City, has a Bachelor's degree in Technology Information from UANL (Universidad Autónoma de Nuevo León) where he received an award as the student with the most outstanding academic record. He earned Quality and Service Certifications from ISO and Disney Institute.

Eduardo has enabled management models through Customer Voice, Measurement, Improvement and Experience Design programs that allow the development of strategies and the transformation of customer service, processes, marketing and products. He has also implemented Digital Transformation solutions from scratch in industries such as Telco, Data Center, and Entertainment.

He is currently leading the Digital Transformation project with the Salesforce platform and is in charge of customer experience management in the casino industry. In addition to his efforts in IT and CX, he had a performance as an amateur theater actor and participated in a non-profit experience design program at LATAM.



## November 4, 2021 (Thursday)

8:15 - 8:30 am **Welcome Address:** Autonomous University of Nuevo Leon and The Automotive Cluster of Nuevo León (CLAUT) - Ballroom

8:30 – 9:15 am, Thursday, November 4: **Keynote VI** – Online: Broadcast at Cintermex Ballroom



**Alberto de Icaza Bravo**  
Head External Affairs  
ZF Group, México

Topic title: ***Enhancing Safety and Automating Vehicles through Advanced Driver Assistance***

Alberto de Icaza is the Head of External Affairs at ZF Group Mexico.

He has 40 years of experience in the automotive industry, in Mexico and the USA, performing functions such as Production Control, Materials, Sales, and Government Relations in companies that manufacture electrical components, wheels, braking systems, steering, suspension, occupant safety, ADAS electronics, transmissions and electrification.

He holds a B.S. in Industrial Engineering from Universidad La Salle and an M.S. in Management from Tecnológico de Monterrey.

Alberto is a Board Member and former President of the National Autoparts Industry Council (INA).

9:15 am – 10:00 am, Thursday, November 4: **Keynote VII** – Online: Broadcast at Cintermex Ballroom



**Eric Ayanegui, CPM, CRL**  
Director Operations Engineering  
Cintas Corporation, Houston, Texas, USA

***The Need for Reliability and Asset Management Training***

Mr. Eric Ayanegui is currently the director of Operations Engineering of CINTAS. As one of the technical leaders at CINTAS, he has been directing engineering, reliability, quality and safety initiatives across 210 industrial sites across North America and China. He has over 20 years of experience in the industrial laundry industry and has been involved in industrial leading efforts in Reliability and Safety. He is a member of the CINTAS Corporate Executive Faculty teaching Reliability and a certified Plant Maintenance Manager and Certified Reliability Leader. He is a member of Industrial Engineering Academy of Distinguished Alumni of UH and has served on the advisory board of Industrial Engineering Department at UH since 2015. He holds a BS degree in Industrial Engineering from the University of Houston.

10:00 – 10:15 am Break

10:15 – 11:00 am, Thursday, November 4: **Keynote VII** – Online: Broadcast at Cintermex Ballroom



**David Pistrui, Ph.D.**  
Professor of Engineering, College of Engineering & Science  
University of Detroit Mercy, Detroit, Michigan, USA

***Industry 4.0 and Talent Pipeline***

David Pistrui, Ph.D., is an executive, educator, and entrepreneur, with over 35 years of experience serving the corporate, nonprofit, and education sectors. Dr. Pistrui has held corporate leadership positions with both Fortune 500, and midsize companies including VideoCart, MediaOne, Parade Publications, Time Incorporated, and Purex Industries. Dr. Pistrui has worked with a wide range of organizations in over 60 countries including FCA, Ford, Tenneco, Siemens, GM, Eaton, Dentsu, FedEx, KPMG, AT Kearney, Motorola, Wrigley, IBM, GrubHub, Comarch, Minnetronix, Cleversafe, Automation Alley and the World Economic Forum among many others.

Currently Dr. Pistrui is leading a consortium of ten Michigan universities and colleges (and their industry partners) in a multi-year applied research project focusing on Industry 4.0 (the fourth industrial revolution). Dr. Pistrui has served as an economic advisor to the states of Michigan, North Carolina and Illinois, Austrian Federal Economic Chamber, AutoCluster Styria (Austria), Bahrain Institute of Banking and Finance, Middle East Economic Digest, and the Family Firm Institute.

As an educator, he has held faculty appointments at the University of Detroit Mercy, Fayetteville State University (North Carolina), Illinois Institute of Technology, DePaul University, and Alfred University. He has held endowed chairs in entrepreneurship and family business. Dr. Pistrui has co-authored over 60 publications in the areas of talent development, artificial intelligence, robotics, technology entrepreneurship, strategy, family business, and engineering education.

Dr. Pistrui holds a Ph.D. in Applied Economics (Cum Laude) Entrepreneurship and Strategy, from Universitat Autònoma de Barcelona, Spain, and a Ph.D. in Sociology from the University of Bucharest, Romania. He earned a Master of Arts in Liberal Studies degree from DePaul University (Chicago) and a Bachelor of Business Administration, in Marketing and Economics from Western Michigan University.

11:00 – 11:45 am, Thursday, November 4: **Keynote IX** – Online: Broadcast at Cintermex Ballroom



**Professor Jose Arturo Garza-Reyes**  
 Professor of Operations Management  
 Head of the Centre for Supply Chain Improvement  
 College of Business, Law and Social Sciences  
 University of Derby, UK

***How have Supply Chains Evolved to Address the Environmental Sustainability Challenge?***

Jose Arturo Garza-Reyes is a Professor of Operations Management and Head of the Centre for Supply Chain Improvement at the University of Derby, UK. He is actively involved in industrial projects where he combines his knowledge, expertise and industrial experience in operations management to help organisations achieve excellence in their internal functions and supply chains. As a leading academic, he has led and managed international research projects funded by the European Commission, British Academy, British Council and Mexico's National Council of Science and Technology (CONACYT). He has published over 150 articles in leading scientific journals, including the Int. Journal of Production Research, Int. Journal of Production Economics, Journal of Cleaner Production, Production Planning & Control, Supply Chain Management: An International Journal, TQM & Business Excellence, Journal of Manufacturing Technology Management, etc., and a number of international conferences. Professor Garza-Reyes has also published five books in the areas of operations management and innovation, manufacturing performance measurement and quality management systems. He is Co-founder and current Editor of the Int. Journal of Supply Chain and Operations Resilience (Inderscience), Associate Editor of the Int. Journal of Production and Operations Management, Associate Editor of the Journal of Manufacturing Technology Management and Editor-in-Chief of the Int. Journal of Industrial Engineering and Operations Management. Professor Garza-Reyes has also led and guest edited special issues for Supply Chain Management: An International Journal, Int. Journal of Lean Six Sigma, Int. Journal of Lean Enterprise Research, Int. Journal of Engineering Management and Economics, and Int. Journal of Engineering and Technology Innovation. Areas of expertise and interest for Professor Garza-Reyes include general aspects of operations and manufacturing management, business excellence, quality improvement, and performance measurement. He is a Chartered Engineer (CEng), a certified Six Sigma-Green Belt, and has over eight years of industrial experience working as Production Manager, Production Engineer and Operations Manager for several international and local companies in both the UK and Mexico. He is also a fellow of the Society of Industrial Engineering and Operations Management (FIEOM), a fellow of the Higher Education Academy (FHEA) and a member of the Institution of Engineering Technology (MIET).

11:45 am – 12:30 pm, Thursday, November 4: **Keynote V** – Onsite at Cintermex Ballroom



**Franco Omar Ramos Langer**  
 Channel Technical and Business Enablement Manager  
 Siemens Digital Industries Software, Digital Factory Division  
 Siemens DI Mesoamérica, Querétaro, México

Franco Ramos Langer, born in Mexico City, has a Bachelor's degree in Mechatronics Engineering from UVM (Universidad del Valle de México). His professional career started in 2009, as an implementer of CAD/CAM/CAE technologies, highlighting the benefits in the industry, of the technology enforcement in the chain of new products development. In 2015, he joined the Siemens PLM team as a technology consultant for the solutions portfolio, justifying the integration of high performance technology in the value chain for different companies. Franco leads the technological partners of Mesoamerica since 2016, providing technical support, advice, training and the necessary tools to ensure the successful performance of Siemens solutions. Currently, his main interest is to transmit the importance of the available technology implementation, and taking advantage of it, in order to transform and improve current industry processes, to obtain great benefits. His experience is focused on providing solutions for the different challenges that the industry demands nowadays, mainly in the automotive industry, aeronautics, machinery and consumer goods.

## November 5, 2021 (Friday)

8:15 - 8:30 am **Welcome Address:** Tecnológico de Monterrey and RELIEVE (Latin American Network of Energy Efficiency in Vehicles)

8:30 – 9:15 am, Friday, November 5, 2021: **Keynote XI** – Onsite at Cintermex Ballroom



**Dr. Jose Benito Flores-Juarez**  
 Dean of Engineering and Technologies School  
 University of Monterrey, Monterrey, México  
 Past President – American Society for Quality

***Quality 4.0: takes more than technology***

Dr. Benito Flores Juárez is currently Dean of the School of Engineering and Technologies at the University of Monterrey. At the same institution, he has served as Director of Research and Postgraduate Studies and as Director of Human Resources and Quality, in addition to having been a Professor for more than 28 years, both as a Chair and as a Plant. He previously worked as Quality Manager for Philips Lighting Monterrey Plant. In 2019 he was President of ASQ, the world's largest and most influential quality association.



9:15 – 10:00 am, Friday, November 5, 2021: **Keynote XII** – Onsite at Cintermex Ballroom



**Dr. Josep Miquel Piqué Huerta**

HVAC at Carrier

President of Technova Barcelona – La Salle Innovation Park

Manager of Internationalization and Innovation – La Salle URL  
Barcelona, Spain

***Managing the Dealfow of the Ecosystems of Innovation in Industry 4.0***

Josep Miquel Piqué Huerta is PhD in Innovation Ecosystems from La Salle URL, Telecommunication Engineer from La Salle and UPC and MBA from ESADE. He holds also diplomas from Massachusetts Institute of Technology (MIT), University of California-Berkeley and Universitat Ramon Llull. He is President of La Salle Technova Barcelona – La Salle Innovation Park, Founding President of XPCAT (Catalan Network of Science Parks), Vice-President of APTE (Spanish Network of Science Parks) and Past President of IASP (International Association of Science Parks). The central line of his activity is the promotion of Knowledge-based Economy and Society in order to consolidate Knowledge Cities on Smart Cities.

10:00 – 10:15 Break

10:15 – 11:00 am, Friday, November 5, 2021: **Keynote XIII** – Onsite at Cintermex Ballroom



**Marco Antonio Vildoso Flores**

Secretary for Advance FIT Engineering Studies

San Sebastian University, Santiago, Chile

***Cybernetics applied to supply chains in industry 4.0***

Industrial Civil Engineer from the Arturo Prat University of Iquique, Master in Finance and Master in Higher Education, with more than 3,000 hours of practical instruction in fields of administration, management and operations in public and private companies, he currently works as Secretary of Studies in the Faculty of Engineering and Technologies of the San Sebastian University, where he teaches, as a teacher, the subject of Supply Chain Management 1 and 2, for more than 15 consecutive periods to date, he has been a consultant and associate director in Project issues and Technological Operations in Grupo Solux, and has generated training material in Operations, Supply and Supply for the MoreValue training group and the development of HR in the company intersystems 4OL, as well as with experience of more than 30 years in the fields: mass market, retail, academia and consulting for global and multinational companies such as Grupo Vielva; Plastics Hoffens, Carpenter, Gerfor Latin America, among others. Thus, he also currently participates as National Counselor of the Industrial Specialty of the College of Engineers of Chile A.G. participating in higher education commissions and in the hospital projects commission. In the logistics field, he participates in the APLOG network (association of Professionals in Logistics, Chile chapter), as an intermediary between it and the communications department with an emphasis on educational entities.

11:00 – 11:45 am, Friday, November 5, 2021: **Keynote XIV** – Onsite at Cintermex Ballroom



**Dra. Natalia Navarrete**

Chassis Technologies for EVs – Commercial Vehicles

Metalsa, Monterrey, NL 66600, Mexico

***Innovation Ecosystems – Theory and Reality***

Natalia N. Holds a PhD in Structural Analysis of Mechanical System and a MSc. in Automotive Engineering from the Tecnológico de Monterrey, Mexico. She has a B.S. in Electronic Engineering from the Universidad de Antioquia, Colombia. She has been involved in the managing and the execution of R&D projects with the industry and government dependences for more than 16 years in North America (USA, Mexico and Canada), South America (Colombia and Brazil) and Europe (Spain, Belgium, Italy, France and Germany). She has been involved in the incubation of R&D centers for industry, and has been in roles as Adjunct Professor, Technical Lead, testing and validation, virtual analysis and prototype building. Since July 2017, she has joined Metalsa's innovation team to develop next generation products and processes related to chassis structures. Currently she also collaborates as a reviewer for the Research-Technology Management bi-monthly journal.

11:45 am – 12:30 pm, Friday, November 5, 2021 **Keynote XV** – Onsite at Cintermex Ballroom



**Frank Nagorschel**

Director of Talent Solutions

Crystal System Group

Limassol, Cyprus

***Industry 4.0 – Data from Volume to Value***

Over 30 years of experiences in industry, retail, strategy and management consulting related to applied information and communication systems. Today Mr. Nagorschel is coordinating Crystal's Talent Solution and Educational Programs and Evangelist for Industry 4.0 and Industrial Data Management.



## University Partners

University of Monterrey, Mexico  
Business School of Autonomous University of Nuevo Leon, Mexico  
Tecnológico de Monterrey, Mexico  
Binghamton University, The State University of New York (SUNY), USA  
Chiang Mai University, Thailand  
Eastern Michigan University, USA  
Florida Polytechnic University  
Lawrence Technological University, Michigan, USA  
Prince Sultan University, Riyadh, Saudi Arabia  
University of Derby, UK  
University of the District of Columbia (UDC), Washington, DC, USA  
University of New Brunswick at Fredericton, Canada  
University of the District of Columbia, Washington, DC, USA  
Universite De Lorraine, Nancy cedex – France  
Wayne State University, Detroit, Michigan, USA  
Universitas Sebelas Maret (UNS), Surakarta, Indonesia  
Universiti Tun Hussein Onn Malaysia (UTHM)  
EMI, Mohammed V University, Rabat, Morocco

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Cintas Corporation  
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The Automotive Cluster of Nuevo León (CLAUT)  
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CATME, Purdue University  
Indian Institute of Industrial Engineering (IIIE)  
International Federation of Engineering Education Societies (IFEES)  
Pakistan Society of Industrial Engineering (PSIE)  
Society of Cost and Quality Engineers (SCQE)  
Robofest



# Plenary Speakers

## Plenary Session – I

1:00 – 2:45 pm, Wednesday, November 3 – Ballroom 1a

Moderator: Mary Araiza

1:00 - 1:30 pm, Wednesday, November 3 - **Plenary I**



**Dr. Jesús Fabián López-Perez**  
Researcher and Professor, UANL

### **Digital Transformation**

Fabian has performed on Digital Transformation & Data Science leading & managing roles in several companies during the last 35 years. Research & Consulting Professor at UANL since 2002 & in Texas State Univ. from 2013-2016. He has a cross-Industry relevant experience in Retail-CPG, Consulting Services & Manufacturing translating complex predictive & optimization models into business value. His current projects are related to Pricing & Revenue Optimization, Promotional Assortment Planning, Basket & Promotions Recommendation, Category & Planograms Optimization and E-commerce Click-Stream Web Analytics. Other previous projects are Call Center Analytics, People Talent Analytics, Organizational Sentiment Analysis, Workforce & Staff Optimization, Optimal Territory

Design & Routing among others.

His career & contribution is focused in advise customers & provide business value through Advanced Analytics & Digital Transformation solutions. During the last 25 years he has been leading multi-disciplinary business projects to improve utilization of resources in manufacturing, transportation & supply chain. Extensive experience on Advanced Analytics solutions related to Network & Territory Design, Set Covering & Facility Location, Supply Chain Analytics, Multi-Echelon Inventory Optimization, Picking, Routing & Timetabling Optimization, Predictive Maintenance and IoT Analytics, etc. Fabian has a successful path in value generation through business projects in multiple functional areas.

Fabian is SNI Fellow Level 2 (2020-2024), this is highest country-wide distinction granted by Mexican National Council for Science and Technology. (www.conacyt.gob.mx). He has a Post-Doct at Texas State University and a Doctorate Degree (Ph.D.) in Management Science at Univ. de Nuevo Leon. Master Degree in Industrial Engineering and Bachelors on Computer Science & Mechatronics. Additionally, Fabian has earned Advanced professional Certifications as Certified Analytics Professional (CAPs – INFORMS), Predictive Analytics Certification from SAP and Certified in Production & Inventory Management (CPIM-APICS). Fabian has published several works in USA related to technical reports, 2 books in Operations Research field and scientific papers at Indexed Journals. He has a deep expertise in Operations Research and Predictive Analytics Techniques like Multivariate Analysis, Cluster Analysis, Factor Analysis, Random Forests, Robust Regression, Support Vector Machines, Structural Equation Modeling, Linear Mixed Integer Programming, Genetic Algorithms, etc.

1:40 - 2:10 pm, Wednesday, November 3 - **Plenary II**



**Dr. Federico Guadalupe Figueroa Garza**  
Professor, UANL, Monterrey, Mexico

### **Geointelligence as a key driver of digital Transformation**

Originally from Monterrey, Mexico, Doctor in Administration with a specialty in Technological Innovation from the Autonomous University of Nuevo León with more than 17 years of professional experience. In his career there are companies like Heineken working in the areas of information technology, marketing and competitive intelligence. In Rivertrend where he works as CIO supporting federal projects such as FONDEN, FONHAPO in the consulting part in geographic information systems and in the private sector doing business geointelligence consulting and data analysis. He is a SNI Candidate and works as Research Professor and Research Coordinator at the UANL - School of Business.

2:15 - 2:45 pm, Wednesday, November 3 - **Plenary III**



**Reynol Eloy Villarreal González**  
Professor at UANL  
Monterrey, Mexico

### **Industry 4.0 Elements: Implications and Future Perspectives**

Reynol Villarreal graduated in Accounting and Auditor Certified, received a Master degree in International Business Administration in UANL and currently student a PhD in University San Martín de Porres Lima, Peru. He is currently an Associate Professor of Facpya Uanl in International Business since 2006. He works actually in Victory Packaging into the Financing area in Credit, Collections and Leader in Cash Applications since 2007. His current research interest in Industry 4.0, Digital Transformation and Information Systems recognizing the importance for the actual information system and business components essential in enterprises wanting to go digital.

## Plenary Session – II

3:00 – 4:45 pm, Wednesday, November 3 – Ballroom 1a

Moderator: Jenny, UDEM

3:00 - 3:30 pm, Wednesday, November 3 - **Plenary IV**



**Ing. Saul Marengo**  
Senior Vice-president, Neoris

### **Become an Intelligent Enterprise**

Saul Marengo, with more than 20 years of experience in consulting and business management, Saúl oversees and manages the most important business partners for NEORIS. Under his supervision are more than 500 consultants with skills in multiple technologies, ranging from cloud implementation, e-commerce, mobile applications, ERP,

artificial intelligence and data science, internet of things, among some others. He has extensive knowledge and relevant experiences in various industrial sectors, highlighting those related to telecommunications, manufacturing, CPG, and retail, both in Mexico and in other countries. Before joining NEORIS, he collaborated for prominent companies such as: Accenture, Deloitte and Axtel. His high sense of business and focus on results have allowed him to contribute to the development of the industry in Mexico, offering results at a local and global level. Likewise, Saúl is CEO of ActiveTrac, a relevant fleet management solution based on the Internet of Things, for multiple industries. Saúl graduated from Tecnológico de Monterrey as an Electrical Mechanical Engineer, and he holds a master's degree in management from IPADE and different accreditations from the Stanford Graduate School, INSEAD and EGADE.

3:40 - 4:10 pm, Wednesday, November 3 - **Plenary V**



**Ing. Berenice Navarro**  
Engine Systems & HVAC Project Responsible  
Ciudad de México  
México

***Design for Manufacturing and Assembly in the Automotive Industry***

Alejandrina Berenice is an experienced Project Lead Engineer with nineteen years of automotive industry experience in the areas of design, product engineering and engineering project management for Delphi Automotive Systems, General Motors and currently in Stellantis (previously Fiat Chrysler Automobile). Her areas of expertise are: product development, project management, mechanical design, supplier management, engineering problem solving, global team work and management. Berenice holds a Bachelor degree in Mechatronics engineering with a diploma in Industrial Automation with a Master in Science in Automotive Engineering from the university of Tecnológico de Monterrey in Mexico. Berenice won a luminary Award in the HENAAC – Hispanic Engineering National Achievement Awards Conference in 2013 for making significant contributions to the Hispanic technical community as leader and role model.

4:15 - 4:45 pm, Wednesday, November 3 - **Plenary VI**



**Ing. Alejandro Villarreal**  
Director, Commercial Operations & Partner Experience  
Expedia Group  
Bellevue, Washington

***eCommerce, Analysis of Users' Behavior in Latin America and how to attract them***

Alejandro Villarreal graduated from the University of Monterrey with a Bachelor Degree in Information Technologies, and is professional in that area with more than 15 years of experience focusing on the integration of systems (B2B) for companies like Accenture, SAP and Bank of America. He is currently the Director of Commercial Operations and Partner Experience for North and Latin American in Expedia Group (Expedia.com, Hotels.com, Orbitz.com, Trivago, among others). Alejandro and his team give consulting and support to companies that want to integrate

their technology with the solutions that Expedia Partner Solutions can offer (B2B & B2C).

**Plenary Session – III**

1:00 – 2:45 pm, Thursday, November 4 – Ballroom 1a

Moderator: Hussein

1:00 - 1:30 pm, Thursday, November 4 - **Plenary VII**



**Dr. Dimitru Nedelcu**  
Professor  
Technical University of Iasi  
Romania

***The Behavior of Biodegradable Materials in Injection Molding and 3D Printing Processes***

Dimitru Nedelcu is a Professor and Ph.D supervisor at the "Gheorghe Asachi" Technical University of Iasi (TUIASI), Romania, Manager of Fine Mechanics and Nanotechnology Laboratory, President of ModTech Professional Association with 13 branches abroad, ModTech International Conference and Editor-in-Chief of the International Journal of Modern Manufacturing Technologies, Advanced Engineering Forum, International Journal of Manufacturing Economics and Management and International Journal of Hybrid Information Technology. His

research topics: processing and characterization of polymeric and biodegradable materials; management of industrial manufacturing projects. He was a Visiting Professor at TAT, Institute of Engineering, Tokyo, Guest Professor at Joining and Welding Research Institute, Osaka University, Japan and Grenoble Institute of Technology, France. He had Erasmus teaching internships in prestigious universities from Poland, Italy and Mexico. Since with October 2016 he was accepted as Visiting Professor at the Silesian University of Technology, Mechanical Engineering Faculty, Gliwice, Poland. As far as research is concerned, he coordinated 15 national and international projects as project manager/responsible and member in other 16 research projects. He was invited to give 26 lectures, as plenary speaker/keynote speaker/invited speaker at different international conferences and over the years he got 22 national / international awards. Throughout his career, he received a TEMPUS and Romanian Government scholarship at Escuela Tecnica Superior de Ingenieros Industriales, Universidad Politecnica de Madrid. He has published more than 185 scientific papers on ISI and BDI journals and international conferences proceedings. He serves on various journals and conferences review committees.

1:40 - 2:10 pm, Thursday, November 4 - **Plenary VIII**





**Dr. Jamison Kovach**  
PMI Houston Endowed Professor in Project Management  
University of Houston, Texas, USA

***Data: Guilty Until Proven Innocent***

Dr. Kovach is the PMI Houston Endowed Professor in Project Management at the University of Houston. She received her Ph.D. in Industrial Engineering from Clemson University. Her industrial experience includes more than five years as a product and process improvement engineer in the U.S. textile industry. Her current research investigates the use of methods for product and process innovation, expanding the use of these methods, and developing new improvement approaches in a wide range of industries/fields. In recognition of her work, Dr. Kovach was awarded the 2010 ASQ (formerly the American Society for Quality) Feigenbaum Medal. She is an Academician in the International Academy for Quality and an ASQ Fellow. Dr. Kovach currently serves as the Editor for Lean & Six Sigma Review, a quarterly ASQ publication, and she received the ASQ Six Sigma Forum Award for the Advancement of Six Sigma in 2019.

2:15 - 2:45 pm, Thursday, November 4 - **Plenary IX**



**Edgardo J. Escalante-Vázquez, PhD, MBB**  
Professor Emeritus in Industrial Engineering  
Tecnológico de Monterrey, Mexico

***RSM Using Paper Helicopters***

Dr. Edgardo J. Escalante is a Professor Emeritus in industrial engineering at Tecnológico de Monterrey. He has also been a consultant in applied statistics, Six Sigma, problem solving, and quality and productivity improvement in México, North, South and Central América for 36 years. Some of the companies he has worked as a consultant or instructor are General Motors, Carplastic, Rassini, Coca-Cola, Pepsi, Xerox, Cummins, Nemak, General Electric Lighting, FEMSA and John Deere. Dr. Escalante has a PhD in Management Science from Lancaster University, a Master of Science degree in industrial engineering from the Ohio State University, the Diploma of Higher Studies in Sciences from L'Université de Rennes, and a BSc in Electronics and Communications Engineering from ITESM. He is also a Certified Six Sigma Black Belt from the ASQ, and a Certified Six Sigma Master Black Belt from SigmaPro. He has written the books in Spanish: Six-Sigma, Design of Experiments, SPC, and The Analysis and Improvement of Quality.

## Plenary Session – IV

1:00 – 2:45 pm, Thursday, November 4 – Ballroom 1a

Moderator: Fernando

3:00 - 3:30 pm, Thursday, November 4 - **Plenary X**



**Francisco Santos**  
Global Quality Director  
Metalsa

***Metalsa Operating System and Industry 4.0***

Francisco Santos is the Chair-Elect on ASQ's Board of Directors, as well as a past ASQ's Treasurer and member of the Board. Paco has over 25 years of experience as a quality, project management, operations, business development and finance professional and is certified as CMQ/OE. He is currently the Global Quality Director at Metalsa, a global automotive supplier with operations in Mexico, the United States, Brazil, Argentina, India and Thailand. He is a Senior member of ASQ and has served as the Chair of the Monterrey Section. He holds an MBA from EGADE Business School.

3:40 - 4:10 pm, Thursday, November 4 - **Plenary XI**



**Dr. Simona Mihaita**  
Data Science Institute  
Future Mobility Lab  
University of Technology Sydney  
Australia

***The next generation of Digital Twins for smart cities***

Simona is a Senior Lecturer in the University of Technology in Sydney, leading the Future Mobility lab. Her research focus is around data science and artificial intelligence for transport prediction, simulation modelling and optimisation of future mobility in smart cities. She holds several leadership roles in various initiatives such as the Australian-Singapore ARC Linkage Partnership, the Premiere's Innovation Initiative, the On-Demand Mobility trials in Northern Beaches, the connected trucks trials and the electric vehicle impact modelling. She is finalist in the 2019 Australian

Smart Cities Award, nominated for the 2019 Prime Minister's Science Awards, and team winner of the 2018 National ITS Awards.

4:15 - 4:45 pm, Thursday, November 4 - **Plenary XII**



**Dr. Francisco Cantú Ortiz**  
Professor and Researcher  
Tecnológico de Monterrey

**Artificial Intelligence and Digital Transformation 2030: Social and Ethical Considerations**

Francisco J. Cantu-Ortiz is Professor of Computer Science and Artificial Intelligence at Tecnológico de Monterrey. He is member of the Advisory Board for QS-World University Rankings and associate editor of various journals and conferences. His research interests include data science, AI analytics, science & technology management, and philosophy of science & religion. He has published more than 100 scientific documents and is a certified researcher by the National Council for Science and Technology, Mexico. He holds a PhD in Artificial Intelligence from the University of Edinburgh, UK, an MSc in Computer Science from North Dakota State University, USA, and a BSc in Computer Systems Engineering from Tecnológico de Monterrey (ITESM), México. He has supervised around 30 PhD and master theses in Computer Science

## Plenary Session – V

1:00 – 2:45 pm, Friday, November 5 – Ballroom 1a

Moderator: Gaby Mtz

1:00 - 1:30 pm, Friday, November 5 - **Plenary XIII**



**Dr. Laura Peña Parás**  
Professor and Researcher, Engineering Department  
University of Monterrey (UEM), Monterrey, Mexico

**Topic: Nanolubricants for Metalworking Applications**

Laura Peña Parás has been a Professor of the Engineering Department at the University of Monterrey since 2010 and has professional experience as a Materials Engineer at Jacobs Engineering from 2008-2010. She graduated as a Mechanical Engineer Administrator, studies carried out at the University of Monterrey (UEM) with the Award Scholarship, obtaining the Cum Laude distinction. She completed her doctoral studies in Materials Science from Rice University in Houston, Texas. Her areas of specialty are nanotechnology and advanced materials for the metal-mechanical industry. She has been recognized as a National Researcher Level I by the National System of Researchers of CONACYT. She has international publications and patents, as well as participation in conferences. In recognition to the development of a project that applies nanotechnology to lubricants to reduce wear in industrial machinery, the MIT Technology Review distinguished her as one of the "10 best innovators in Mexico" in 2013. This project is part of the permanent interactive exhibition "Interdisciplina" from the Mexican museum Papalote Museo del Niño, in Monterrey, inaugurated in 2018. She obtained the "Pro Magistro Roberto Garza Sada" Award for her

outstanding teaching work at UDEM and the "UEM's Research Career Award" in 2018. She was recently awarded the "2019 Research Award" from the Mexican Academy of Sciences in the Engineering and Technology Area.

1:40 - 2:10 pm, Friday, November 5 - **Plenary XIV**



**Ing José Luis González Mona**  
Software Quality Assurance Lead  
Common Securitization Solutions

**Software Quality Assurance in FinTech, current trends and what's coming**

Jose Luis Gonzalez is a Quality Assurance Engineer from Monterrey, Mexico. He obtained his Bachelors Degree in Electronic Systems Engineering in 2007, from Tecnológico de Monterrey. Since 2008, he has focused on Software Quality Assurance, working first in the telecom industry for clients like Nokia and Texas Instruments. Then since 2009, after joining Accenture, he moved to the Financial Services area supporting clients in the USA. Jose moved to the United States in 2014 to support a Mortgage Securitization project. In 2017 he was invited to join Common Securitization Solutions (CSS), a FinTech company that supports the Uniform Mortgage-Backed Security (UMBS). CSS is a joint-venture of Fannie Mae and Freddie Mac in the United States, where Jose has gained vast

experience related to top technology, automation, Agile methodology, and the best practices in the SDLC.

2:15 - 2:45 pm, Friday, November 5 - **Plenary XV**



**Dr. Jorge Lozoya**  
Professor, Engineering and Science School  
Core Researcher, Automotive Consortium for Cyberphysical Systems  
School of Engineering and Sciences, Tecnológico de Monterrey

**Conscious Technologies for Smart Communities: Case**

Jorge de-J. Lozoya-Santos received a BE in Electronic Engineering in Instituto Tecnológico de la Laguna, Torreón, México (2000), a Master Science in Automation (2005) and PhD Degree in Mechatronics and Advances Materials (2013) from the Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Monterrey, Monterrey, México with research stays in GIPSA-Lab, INPG, Grenoble, France. Jorge has current collaborations with Politecnico di Milano, Italy; Institute Polytechnique de Grenoble, France; Università degli Studi di Modena and Reggio Emilia, Italia among others. He is a member of the National System of Researchers in Mexico Category 1. He is part of the national network of reviewers of CONACYT projects. Besides, He is reviewer of international journal articles. He has more than 25 international conferences, 10 indexed journals and 4 patent application. His research interests are intelligent transportation systems, modeling and control of systems, applied automatic control and automotive systems. He has experience in industry as process engineer and automation leader, and in academy as Professor and Director of Scientific Research. Dr. Lozoya Santos is Research Professor in Tecnológico de Monterrey, School of Engineering and Sciences.

## Plenary Session – VI

1:00 – 2:45 pm, Friday, November 5 – Ballroom 1a

Moderator: William

3:00 - 3:30 pm, Friday, November 5 - **Plenary XVI**



**Fabiola Solorio**  
 Director FP&A, Carrier HVAC, Fabiola Solorio  
 Director FP&A, Carrier HVAC HQ  
 Co-Chair, Women's Empowerment @Carrier  
 Charlotte, NC

### *Business in a changing environment*

Fabiola Solorio is Director, Financial Planning and Analysis, Global HVAC at Carrier. She has a bachelor's degree in International Finance from the University of Monterrey (Mexico), an MBA from NEOMA Business School (France) and finance courses from University of Vaasa (Finland). She graduated from two leadership programs ELEVATE at Carrier (USA) and Executive Program at Rotman Business School (Canada). She joined Carrier in 2010 and in her current role she oversees the financial reporting, forecast process, annual planning and works closely with the CFOs and leadership team to support the delivery of strategic commitments. Prior to her current role, Fabiola was the CFO for Chubb Canada, where she worked closely with sales and operations to provide support and direction, looking for efficiency, cost opportunities and cash conversion. Through her career, Fabiola has participated in two ERP implementations and several special projects, working with multiple groups across the organization. She is actively involved in diversity & inclusion activities, co-leading We@Carrier, an employee resource group which mission is to promote, support and inspire women across the organization, creating a diverse and inclusive environment. She is an IMA member.

3:40 - 4:10 pm, Friday, November 5 - **Plenary XVII**



**Lydia Gutierrez**  
 President of Hacienda Mexican Foods  
 Detroit, Michigan

### *Promoting woman and entrepreneurship to achieve economic growth in an urban neighborhood*

Lydia Gutierrez serves as President and CEO of Hacienda Mexican Foods a manufacturer of Tortillas and tortilla chips located in Detroit, Michigan. HMF is a multimillion-dollar company co-founded by Lydia and her late husband in 1990. As President, Lydia is responsible for running all facets of her business. She has a proven track record with more than 30 years of experience in the food business. Over the years she has grown her manufacturing company from a two-person operation to employing more than 70 people. Lydia is an entrepreneur, she understands the food industry and the importance of compliance, supply chain operations, including, manufacturing, research and development, procurement, distribution, planning, transportation, inventory management, quality and more importantly the production floor. She has been at the forefront of Hispanic woman in manufacturing and received a lifetime achievement award from Michigan Food & Beverage Association and inducted to the Hall of Fame for the Tortilla Industry Association in 2020. She has served as the Board Chair to many Associations and numerous Executive Boards including, New Economy Initiative, Tortilla Industry Association, Food Policy Council for the State of Michigan, Crime Stoppers, Detroit Economic Growth Corporation, Henry Ford Health Systems, New Detroit, Child's Hope, Academy of America School, Latino Family Services and Co-Chaired the "Woman In-Action" conference sponsored by the Society of Hispanic Professional Engineers. Lydia attended Lee University and is the daughter of immigrant parents.



**Kaustubh Kale**  
 Hacienda Mexican Foods  
 Detroit, Michigan

**Kaustubh Kale** received his Master's degree in Industrial Engineering from Lawrence Technological University, Michigan, USA in May 2020. He graduated from Savitribai Phule Pune University in India having major in Mechanical Engineering in 2015. Has a Six Sigma Green Belt certification, also successfully achieved implementation in Lean manufacturing tools & techniques for process improvement working as a Lean Manufacturing Engineer in India. Kaustubh has received 'Outstanding Student Leadership Award' at IEOM Detroit, USA conference in 2020. Currently he is working as an Industrial Engineer at 'Hacienda Mexican Foods' Detroit since 2020 and successfully achieved process improvements by implementing Lean Tools, reductions in

waste by close monitoring & streamlining production schedule also working on different projects for developing SOP, maintenance program.

4:15 - 4:45 pm, Friday, November 5 - **Plenary XVIII**



**Albes Rafael Urdaneta Urdaneta**  
 Energy Manager  
 Ternium  
 Monterrey, Mexico

Albes Urdaneta is Energy Manager at Ternium Mexico since 2019. He is focused on working to produce green steel, without CO2 emissions. Albes manages Ternium Mexico's Energy Efficiency Team, Controlling energy capex and executing / coordinating energy projects, and is also responsible for implementing ISO in the main plants. He has been working on Energy Efficiency matters since 2014.

Albes graduated with honors and ANFEI recognition from the Universidad Regiomontana, from Mechanical Engineering, and continued his studies with a Master in Mechatronics. Albes is passionate about having a carbon-free economy.



# Panel Sessions

## Panel I: Successful Projects of Industrial Solutions Developed By Students

1:00 - 2:45 pm, Wednesday, November 3, 2021 – Ballroom 1b

Partner: UDEM, Moderator: Dr. Teresa Verduzco-Garza



**Dr. Teresa Verduzco-Garza**  
Professor and Researcher  
Industrial and Systems Engineering Department  
Engineering School  
University of Monterrey, Mexico

Dr. Teresa Verduzco-Garza is a Professor and researcher for the Engineering School in University of Monterrey, Mexico (UDEM) at the Industrial and Systems Engineering department. Her research and experience focuses on Clusters for competitiveness, Logistics clusters, Supply Chain Management, Operations Management, Supply Chain Strategy. Developed a combined research stay at Orkestra Institute for Cluster and Competitiveness and Deusto University in Basque Country, Spain during 2019. She has previous experience in the industry field, holding positions as project manager, account manager, Corporate Strategic Planning, Geographic Expansion manager, among others, in important worldwide recognized enterprises. Nowadays, she works with important clusters in Mexico, developing supply chain and Logistics Synergies (Co-Loading) projects for competitiveness, as well as strategic planning initiatives, supply chain network and cluster mapping. Teresa has published his works in journals with national and international scientific circulation, has participated as a speaker in important conferences in forums such as IEOM, SISE, IISE, ASEM, TCI Global Conferences in countries such as the USA, Colombia, South Korea, Canada, the Netherlands, France and other European countries. Additionally, she is an active member of IEOM, APICS and TCI Network International Competitiveness Institute, as well as of the Harvard Business School network of the Institute for Strategy and Competitiveness.

### Panelists:



**Fernando Gonzalez Aleu**  
Associate Professor  
Universidad de Monterrey (UDEM)  
Mexico

Fernando Gonzalez Aleu is an Associate Professor at the Universidad de Monterrey (UDEM) in Mexico. He received a BS in Mechanical and Management Engineering at UDEM, a MS at ITESM in 1999, and both an MS and PhD in Industrial and Systems Engineering from Virginia Tech in 2015 and 2016, respectively. His research focuses on the applications of continuous improvement projects. Prior industry experience includes 15 years implementing quality systems, environmental systems, and management systems. He is member of the Institute of Industrial and Systems Engineers, the American Society for Engineering Management, and the American Society for Quality.



**Antonio Mogro**  
Tecnológico de Monterrey

Antonio E. Mogro is a full-time researcher in the Research Group on Energy and Climate Change from Tecnológico de Monterrey. He is a PhD candidate with a master's degree in automotive engineering graduated with honors. He is specialized in internal combustion engines, vehicle powertrain, and real-world vehicle emissions with over 10 research projects, 6 years in research centers, and 6 scientific indexed papers.



**Jorge Rodríguez**  
UDEM EsIT PEF

Academic Grade: Systems and Industrial Engineering at UDEM and Minor in Data Analytics at University of Michigan. Most relevant experience is

- Engineering Innovation & Strategic Consultant mainly focused in Continuous Improvement Projects regarding several methodologies such as Lean Manufacturing and Six Sigma (in my experience)
- Business Intelligence and Data Analytics Engineer in a local soy candles manufacturer.
- Currently an Embedded Product Data Analytics Engineer in Caterpillar Inc. where I:
  - \* Remotely configure and troubleshoot data collection units on company and customer equipment.
  - \* Monitor data collection activities to reduce missing or inaccurate data.
  - \* Provide support within numerous projects simultaneously regarding the Data Analytics activities and

automating the daily analysis of new data.

### Analítica OXXO

## Panel II: Reinventing the local Automotive Industry towards Electromobility

3:00 - 4:45 pm, Wednesday, November 3, 2021 – Ballroom 1b

Partner: CLAUT, Moderator: Mónica Rodríguez

### Panelists:



**Daniel Graf**  
New Ventures Lead  
Questum  
San Pedro Garza García  
Nuevo León, 66265, México



**Alejandro Arrambide**  
Vehicle Structures & Electrification North America  
Nemak  
García, Nuevo León, 6600, México



**Joan Hinojo**  
General Manager  
Circontrol  
Barcelona, 08232, Spain



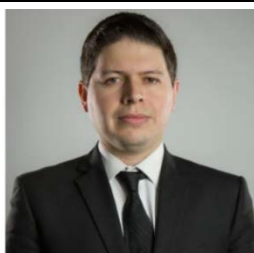
**Joan Hinojo** was born in Puigreig (Barcelona, Spain). He is married and has three children. He has lived in Spain and United States. He is an Electrical Engineer by the University of Barcelona. He has different masters studies, among them, Commercial direction (Harvard Business School, Barcelona, Boston), Direction of Marketing (EADA, Barcelona), MBA (Nord program, Chamber of Commerce of Terrassa, Barcelona) and multiple seminars related to Power Efficiency and Business Management. He has made multiple papers and speeches in diverse countries, on the reality and the charge of electrical vehicles, and on power efficiency. At a very young age, he started working as electrician in the industry. Later on, he was Electric Power auditor in the Spanish group Enerbus. At the age of 26 he continued its race in the United States as "Project Manager" at the Mc Donnell Douglas group, based in New York. He returned to Barcelona as Commercial Director of Vascot, manufacturer of special electrical motors. He continued its professional carrier as International Director and Key Account Manager in Circutor, Spanish company world-wide leader in electrical power efficiency and with presence in more than 100 countries. Since 2008 he is General Manager of Circontrol, with presence in 60 countries, specialized in Electric Vehicle charging solutions.

## Panel III: Entrepreneurship Education

1:00 - 2:45 pm, Thursday, November 4, 2021 – Ballroom 1b

Partner: UANL, Moderator: Aida Miriam Cisneros Gómez

### Panelists



**Alfonso López Lira**  
Coordinador de la Maestría de  
Innovación y Emprendimiento de  
FACPYA



**Juan Ignacio González**  
Profesor Departamento ICyG  
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Emprendimiento de IGE



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Emprendimiento  
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**Aldahir Caballero Campbell**  
Director of the incubation  
and entrepreneurship

## Panel IV: Women in Industry and Academia

3:00 - 4:45 pm, Thursday, November 4, 2021 – Ballroom 1b

Partner: ITESM, Moderator: Adriana Vargas

## Panelists



Griselda Trujillo (ITESM)



Karina Astorga

Dr. Alba Avila  
Professor, UniandesNicole Rodríguez  
(AT&T)

5:00 - 6:45 pm, **Thursday, November 4, 2021 – Ballroom 1b**  
**Relieve's Annual Meeting**

## Panel V: Diversity and Inclusion Panel sponsored by Ford Motor Company

1:00 – 4:00 pm, **FRIDAY, November 5 - Virtual**

### Panel Chair



#### Professor Donald M. Reimer

**President, The Small Business Strategy Group, Detroit, Michigan, USA**  
**Adjunct Faculty – A. Leon Linton Department of Mechanical Engineering**  
**Lawrence Technological University, Southfield, Michigan, USA**

Donald M. Reimer is an adjunct faculty at the A. Leon Linton Department of Mechanical Engineering in College of Engineering at Lawrence Tech in Southfield, Michigan. He coordinates the Certificate of Entrepreneurial Engineering Skills. Mr. Reimer holds a Bachelor of Science degree in Industrial Management from Lawrence Technological University and a Master of Arts degree in Political Science from University of Detroit/Mercy. He is a Certified Management Consultant with over 35 years of experience in working with closely-held businesses. He has taught courses in entrepreneurship, strategic management, corporate entrepreneurship and innovation for engineers. Mr. Reimer is a member of the Lawrence Tech Kern Campus Committee, Coordinator of the Lawrence Tech Innovation Encounter. He is faculty Advisor of the Collegiate Entrepreneurs' Organization. Mr. Reimer serves as a Kern Fellow of The Kern Family Foundation, Co-Direct of the Coleman Fellows Program, member of the National Collegiate Entrepreneurs' Organization Faculty Advisory Council and is a member of the American Society of Engineering Education. He has operated his own consulting company – The Small Business Strategy Group for 23 years. He published numerous articles on small business, entrepreneurship and strategic thinking. He has received several awards and recognition by local, state and federal agencies for his work in entrepreneurship and

minority business development. Mr. Reimer served as member of the Minority Economic Development Committee of New Detroit. Mr. Reimer is member of the Small Business Advisory Council of the Detroit Regional Chamber of Commerce. Mr. Reimer is a member of Advisory Board of the Milwaukee Junction Small Business Assistance Center. He is also a member of the Applied Innovation Alliance. Mr. Reimer serves as a KEEN Fellow for The Kern Family Foundation and is a member of United States Association of Small Business and Entrepreneurship.

### Panel Speaker I



#### María Elena Huertas

**Environmental Engineer**  
**Universidad de los Andes**  
**Bogotá, Colombia**

María Elena Huertas is an Environmental Engineer from the Universidad de los Andes and a Ph.D. in Engineering Sciences with a special emphasis on atmospheric sciences from Tecnológico de Monterrey. Her professional career has been based on the development of research projects in the areas of energy, emissions and air quality, which have been financed by national and international institutions such as: the Ministry of the Environment of Colombia, Ecopetrol, the National Council of Science and Technology of Mexico (CONACYT), the Secretary of Sustainable Development of Monterrey, Mexico, the University of Stuttgart and the Fraunhofer Institute of Germany, among

others. She has developed teaching work at the Universidad Tecnológica de Bolívar in Cartagena Colombia and currently, she is a professor and researcher at the Tecnológico de Monterrey, Mexico. She also belongs to the National System of Researchers of Mexico and has more than 10 publications of articles in indexed journals. For the development of her doctorate, she was awarded a scholarship by CONACYT and the Tecnológico de Monterrey, additionally in 2015 she was awarded one of the 20 scholarships for professors in Latin America for research mobility. Finally, she has participated in research stays at Texas A & M University and the University of California in the United States.

### Panel Speaker II





**Dr. Ximena Córdova Vallejo**  
**Profesora**  
**Colegio de Ciencias e Ingenierías, Politécnico**  
**Universidad San Francisco de Quito**  
**Ecuador**

Ximena M. Córdova, Ph.D., was the first woman to graduate in Mathematics from the National Polytechnic School, Quito-Ecuador. She has a Master's in Quality, Management and Productivity and a Master's in Actuarial Sciences from The University of Iowa, Iowa, USA. She holds a Ph.D. in Industrial Engineering from Wichita State University, USA. She was also the first woman to hold the position of Provost at the San Francisco de Quito University (USFQ) until 2020. She has served as a Professor at the San Francisco de Quito University for more than 20 years and was Dean of the School of Engineering of the College of Sciences and Engineering. She is currently a Senior

Professor in the Department of Industrial Engineering. She is one of the founders of the project "Women in Science and Engineering", WISE, to encourage women to study in the areas of science and engineering. She has managed to influence at least 5 female alumni of the USFQ of Industrial Engineering to obtain their Ph.D. in Engineering and for many graduates to continue their four-level studies. Her research is applied to Green Supply Chains through the modeling, analysis and optimization of logistics systems using CO2 emissions as a performance measure and the use of Ecuadorian anthropometry data for the ergonomic design of work spaces.

#### Panel Speaker III



**Dr. Asaad Makki**  
**EESE Chief Engineer**  
**Ford Motor Company**  
**Dearborn, Michigan, United States**

Dr. Makki has over 30 years of professional experiences in the automotive field. Dr. Makki has been at Ford Motor Company for about 22 years where he held several positions in the product development organization. Currently, he holds a Chief Engineer position in the Features & Software Integration and Validation organization at Ford Motor Company. In this position, Dr. Makki has global responsibilities for defining and implementing state-of-the-art software validation tools and methods with no reliance on physical prototypes. Additionally, Dr. Makki has been driving the setup and operation of Centers-of-Excellence (CoE) in Low-Cost Countries to help the company achieve huge engineering efficiencies. Prior to his current role, Dr. Makki held a position of a manager for Core Subsystems and

In-Vehicle-Infotainment (IVI) Design Verification department for about 2 years. In 2014, Dr. Makki took on a position of a manager for the Upper Body Electronics department as an international assignment in Mexico for 3 years. Dr. Makki acted as a supervisor for several positions with the Electrical functional area for several years. Prior to joining Ford, Dr. Makki worked at TRW automotive where he held several positions within the engineering organization. His latest position at TRW was an Engineering Systems manager where he led the Computer Aided Design and Engineering organization. Dr. Makki has several publications in several industry journals. Additionally, he acted as the vice chair for the IEEE SE Michigan chapter for several years. He also co-chaired the SAE EDA subcommittee for several years.

#### Panel Speaker IV



**Daniel Hodges**  
**President**  
**Meknology LLC**  
**Novi, Michigan, USA**

Daniel Hodges is a Mechatronics Engineer. He is the Founder and CEO of Meknology LLC, a two year old tech startup focused on creating technical solutions centered around issues of sustainability and social justice. Currently, Meknology is ambitiously approaching issues of wastewater treatment and water scarcity with its new and

innovative approach to vacuum distillation. It involves the use of a proprietary architecture and smart energy management with hybrid and full renewable energy power sources. He received his Bachelor of Science in Mechanical Engineering from MSU and his Master of Science in Mechatronic and Robotic Engineering from Lawrence Technological University. Daniel's professional and technical experiences include product design, project management, process development, test planning, marketing studies, customer engagement, and equipment design and build in the automotive, appliance, plumbing, nuclear and aerospace industries. His innovative and entrepreneurial nature has led to many commercialized new patent protected products for many clients and Meknology's own water purification technology.



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Dr. Ravi Gor, St. Kabir Institute of Professional Studies, Ahmedabad, India	Dr. Gopalan Srinivasan, University of New Brunswick, Canada
Dr. Kannan Govindan, University of Southern Denmark, Denmark	Dr. Zuraidah Sulaiman, Universiti Teknologi Malaysia (UTM), Johor, Malaysia
Dr. Md. Mamun Habib, Universiti Utara Malaysia	Dr. Balan Sundarakani, University of Wollongong in Dubai, UAE
Dr. Ramy Harik, University of South Carolina, USA	Laurent Tchommo, James Madison University, VA, USA
Dr. Maruf Hasan, University of New South Wales, Australia	Dr. Murat Caner Testik, Hacettepe University, Ankara, Turkey
Dr. Ahmed Kadhim Hussein, Babylon University, Iraq	Dr. Theodore B. Trafalis, University of Oklahoma, USA
Dr. Javad Khamisabadi, Islamic Azad University, Tehran, Iran	Dr. Vladimir I. Tsurkov, Russian Academy of Sciences, Moscow, Russia
Dr. Raja Kothandaraman, Alpha College of Engineering, Chennai, India	Dr. Hui-Ming Wee, Chung Yuan Christian University, Taiwan
Dr. Brigitte Jaumard, Concordia University, Canada	Dr. Yong Yin, Yamagata University, Japan
Dr. Rashmi Jha, Gitarattan International Business School (GIBS), Affiliated to Guru Gobind Singh Indraprastha University, New Delhi, India	Dr. Norzaidahwati Zaidin, Universiti Teknologi Malaysia, Johor, Malaysia
Dr. Shahrul B. Kamaruddin, Universiti Sains Malaysia	Dr. Suhaiza Hanim Zailani, University Malaya, Malaysia
Dr. Francis Leung, City University of Hong Kong, China	Dr. Linda L. Zhang, IESEG School of Management, Lille-Paris, France
Dr. Boudouda Malik, University of Champagne-Ardenne, France	

## Submissions and Speakers from Countries and Territories

1. Algeria	15. Ethiopia	29. Mexico	43. Spain
2. Argentina	16. France	30. Morocco	44. Sri Lanka
3. Australia	17. Finland	31. Mozambique	45. Sweden
4. Bangladesh	18. Germany	32. Nigeria	46. Taiwan
5. Brazil	19. Ghana	33. Pakistan	47. Thailand
6. Canada	20. India	34. Paraguay	48. Turkey
7. Chile	21. Indonesia	35. Peru	49. Uganda
8. China	22. Iran	36. Philippines	50. United Arab Emirates
9. Colombia	23. Italy	37. Portugal	51. United Kingdom
10. Costa Rica	24. Japan	38. Romania	52. United States
11. Cuba	25. Kazakhstan	39. Saudi Arabia	53. Vietnam
12. Denmark	26. Kosovo	40. Singapore	54. Zimbabwe
13. Ecuador	27. Kuwait	41. South Africa	
14. Egypt	28. Malaysia	42. South Korea	



# Parallel Sessions

## November 3, 2021 (Wednesday)

8:00 - 8:30	<b>Welcome Address:</b> Prof. José Benito Flores Juárez, Director de la División de Ingeniería y Tecnologías, Universidad De Monterrey, Mexico - Ballroom									
8:30 - 9:15	<b>Keynote I (Opening Keynote): Dr. José Ignacio Huertas</b> , Professor, School of Engineering and Sciences, Energy and Climate Change Research Group, Instituto Tecnológico y Estudios Superiores de Monterrey, Campus Monterrey, Nuevo León, Mexico - Smart Mobility and Smart Cities - Ballroom									
9:15 - 10:00	<b>Keynote II: Dr. Manuel Montoya</b> , General Director of the Automotive Cluster of Nuevo León (CLAUT) - Ballroom									
10:00 - 10:15	Break									
10:15 - 11:00	<b>Keynote III: Dr. Michele Roccotelli</b> , Assistant Professor, Politécnico de Bari, Bari, Italy - Ballroom									
11:00 - 11:45	<b>Keynote IV: Dr. Patrick Dallasega</b> , Professor, Free University of Bozen-Bolzano, Italy - Ballroom									
11:45 - 12:30	<b>Keynote V: Eduardo Caballero Terrazas</b> , Customer Experience Manager, Logrand Entertainment Group, San Pedro Garza García, NL, Mexico									
12:30 - 1:00	Lunch Break									
	<b>Onsite</b>					<b>Online</b>				
	<b>Ballroom 1a</b>	<b>Ballroom 1b</b>	<b>Room 1</b>	<b>Room 2</b>	<b>Room 3</b>	<b>Room 5</b>	<b>Room 6</b>	<b>Room 7</b>	<b>Room 8</b>	<b>Room 9</b>
1:00 - 2:45	Plenary I Plenary II Plenary III	<b>Panel 1: Successful industrial solutions by students</b>	Undergraduate Student Paper Competition	Doctoral Dissertation Competition	Smart Mobility and Smart Cities	Global Engineering Education I	Graduate Paper Competition	Industry 4.0	Modeling and Simulation	Operations Management
3:00 - 4:45	Plenary IV Plenary V Plenary VI	<b>Panel 2: Automotive Electromobility</b>	Undergraduate Research Competition	Supply Chain and Logistics Competition	Operations Management	Global Engineering Education II	Manufacturing	Quality		
5:00 - 6:45		<b>Relieve's Annual Meeting</b>				Global Engineering Education III	Human Factors Competition	Competitions	Energy Efficiency	Engineering Management
7:00 - 8:45						Undergraduate Student Paper Competition	Undergraduate Research Competition	High School STEM Competition	Graduate Paper Competition	Doctoral Dissertation Competition
9:00 - 11:00								Business Management	eBusiness /eService	Supply Chain

## November 4, 2021 (Thursday)

6:00 - 8:00	Technical Presentations Virtual via zoom - Rooms 5-9									
8:15 - 8:30	<b>Welcome Address:</b> Autonomous University of Nuevo Leon and The Automotive Cluster of Nuevo León (CLAUT) - Ballroom									
8:30 - 9:15	<b>Keynote VI: Alberto de Icaza</b> , Head of External Affairs, ZF Group Mexico - Ballroom									
9:15 - 10:00	<b>Keynote VII: Eric Ayanegui</b> , CPMM, CRL, Director Operations Engineering, Cintas Corporation, Houston, Texas, USA - Ballroom									
10:00 - 10:15	Break									
10:15 - 11:00	<b>Keynote VIII: David Pistrui, Ph.D.</b> , Professor of Engineering, College of Engineering & Science, University of Detroit Mercy, Detroit, Michigan, USA									
11:00 - 11:45	<b>Keynote IV: Prof. Jose Arturo Garza-Reyes</b> , Head of the Centre for Supply Chain Improvement, College of Business, University of Derby, UK									
11:45 - 12:30	<b>Keynote X: Franco Omar Ramos Langer</b> , Channel Technical and Business Enablement Manager, Siemens Digital Industries Software, Mexico									
12:30 - 1:00	Lunch Break									
	<b>Onsite</b>					<b>Online</b>				
	<b>Ballroom 1a</b>	<b>Ballroom 1b</b>	<b>Room 1</b>	<b>Room 2</b>	<b>Room 3</b>	<b>Room 5</b>	<b>Room 6</b>	<b>Room 7</b>	<b>Room 8</b>	<b>Room 9</b>
1:00 - 2:45	Plenary VII Plenary VIII Plenary IX	<b>Panel 3: Women In Industry &amp; Academia</b>	Environmental Systems Engineering	Manufacturing	Automation and Modeling	Industry Solutions I	Quality and Reliability	Smart Mobility and Cities	SCM and Finance	Data Analytics
3:00 - 4:45	Plenary X Plenary XI Plenary XII	<b>Panel 4: Entrepreneurship Education</b>	Operations Management	Modeling	Energy and Efficiency	Industry Solutions II	Systems Engineering	Lean Six Sigma & Service		
5:00 - 6:45		<b>Relieve's Workshop</b>				Industry Solutions III	Smart Mobility	Entrepreneurship	Artificial Intelligence:	Business Management
7:00 - 8:45						Business Management	Business Management	Business Management	Healthcare Systems	Industrial Services
9:00 - 11:00						Business Management	Business Management	Entrepreneurship	Design and Analysis	Sustainability

## November 5, 2021 (Friday)

6:00 - 8:00	Technical Presentations Online - Rooms 5-9									
8:15 - 8:30	<b>Welcome Address:</b> Tecnológico de Monterrey and RELIEVE (Latin American Network of Energy Efficiency in Vehicles) - Ballroom									
8:30 - 9:15	<b>Keynote XI: Prof. José Benito Flores Juárez</b> , Director de la División de Ingeniería y Tecnologías, Universidad De Monterrey, Mexico - Ballroom									
9:15 - 10:00	<b>Keynote XII: Dr. Josep Miquel Piqué Huerta</b> , HVAC at Carrier, President of Technova Barcelona - La Salle Innovation Park, Manager of Internationalization and Innovation - La Salle URL, Barcelona, Spain - Ballroom									
10:00 - 10:15	Break									
10:15 - 11:00	<b>Keynote XIII: Marco Antonio Vildoso Flores</b> , Secretary for Advance FIT Engineering Studies, San Sebastian University, Santiago, Chile - Ballroom									
11:00 - 11:45	<b>Keynote XIV: Dra. Natalia Navarrete</b> , Chassis Technologies for EVs - Manager, Commercial Vehicles, Metalsa, Monterrey, Nuevo León, Mexico									
11:45 - 12:30	<b>Keynote XV: Frank Nagorschel</b> , Director of Talent Solutions, Crystal System Group, Limassol, Cyprus - Ballroom									
12:30 - 1:00	Lunch Break									
	<b>Onsite</b>					<b>Online</b>				
	<b>Ballroom 1a</b>	<b>Ballroom 1b</b>	<b>Room 1</b>	<b>Room 2</b>	<b>Room 3</b>	<b>Room 5</b>	<b>Room 6</b>	<b>Room 7</b>	<b>Room 8</b>	<b>Room 9</b>
1:00 - 2:45	Plenary XIII Plenary XIV Plenary XV	<b>Panel V: Diversity and Inclusion Panel</b>	Engineering Education	Business Management	Innovation	Global SCM I	Data Analytics	Business Management	Decision Sciences	
3:00 - 4:45	Plenary XVI Plenary XVII Plenary XVIII	Sponsored by Ford Motor Company	Supply Chain Management	Data Analytics	Energy	Global SCM II	Manufacturing			
5:00 - 6:45						Global SCM III	OM			
7:00 - 10:00 pm <b>Conference Awards Ceremony - Onsite at Cintermex</b> (Virtually Joining Open Available)										

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**November 3, 2021 (Wednesday): 8:00 am – 1:00 pm - Ballroom**


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## Keynote Speakers – Day 1

8:00 - 8:30 am Welcome Address:

**Prof. José Benito Flores Juárez**

Director de la División de Ingeniería y Tecnologías, Universidad De Monterrey, Mexico and Past President – American Society for Quality (ASQ)

8:30 - 9:15 am Keynote I (Opening Keynote):

**Dr. José Ignacio Huertas**

Professor, School of Engineering and Sciences, Energy and Climate Change Research Group, Instituto Tecnológico y Estudios Superiores de Monterrey, Campus Monterrey, Nuevo León, Mexico

9:15 - 10:00 am Keynote II:

**Dr. Manuel Montoya**

General Director of the Automotive Cluster of Nuevo León (CLAUT)

10:00 - 10:15 am Break

10:15 - 11:00 am Keynote III:

**Michele Roccotelli**

Assistant Professor, Politécnico de Bari, Italy

11:00 - 11:45 am Keynote IV:

**Dr. Patrick Dallasega**

Free University of Bozen-Bolzano, Italy

11:45 - 12:30 am Keynote V:

**Eduardo Caballero Terrazas**

Customer Experience Manager  
Logrand Entertainment Group

12:30 - 1:00 pm Lunch Break

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## November 3, 2021 (Wednesday) - Session: 1:00 – 2:45 pm

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**1:00 – 2:45 pm, WEDNESDAY**

**Plenary Session - I**

**Ballroom 1a**

Session Chair: Mary Araiza

1:00 - 1:30 pm, Wednesday, November 3 - Plenary I

Dr. Jesús Fabián López-Perez  
Researcher and Professor, UANL

Digital Transformation

1:40 - 2:10 pm, Wednesday, November 3 - Plenary II

Dr. Federico Guadalupe Figueroa Garza  
Professor at UANL

Geointelligence as a key driver of digital Transformation

2:15 - 2:45 pm, Wednesday, November 3 - Plenary III

Reynol Eloy Villarreal González  
Professor at UANL  
Monterrey, Mexico

Industry 4.0 Elements: Implications and Future Perspectives

**1:00 – 2:45 pm, WEDNESDAY**

**Panel 1**

**Ballroom 1b**

## **Panel: Successful Projects of Industrial Solutions Developed By Students**

Partner: UDEM, Panel Chair/Moderator: Teresa Verduzco

### **Panelists**

Fernando Gonzalez Aleu Associate Professor, Universidad de Monterrey (UEM), Mexico	Antonio Mogro Tecnológico de Monterrey
Jorge Rodríguez (UEM EsIT PEF)	Analítica OXXO

**1:00 – 2:45 pm, WEDNESDAY**

**Undergraduate Student Paper Competition**

**Breakout Room 1 - Onsite**

Session Chair: Dr. Antonio Martínez Torteya. Mechanical and Electrical Engineering, Universidad de Monterrey

### **ID 133 Understanding Makerspaces' Goals and Success**

Laura A. Valadez Rojas and Azael Capetillo, School of Engineering and Sciences, Tecnológico de Monterrey, Av. Eugenio Garza Sada 2501 Monterrey 64849, NL, México

### **ID 140 Science Fiction and Innovation: Prototyping the Future from Uncertainty**

Sinai Galeana, Azael Capetillo and David Güemes-Castorena, School of Engineering and Sciences, Tecnológico de Monterrey, Av. Eugenio Garza Sada 2501 Sur, Tecnológico, 64849 Monterrey, N.L, México

### **ID 255 Release and Start-up of the Stellantis DS Mirrors Production Line**

Katia Mayela Lozano Ortiz, María Fernanda Vázquez Fernández, Alondra Valeria Salazar Orozco  
Industrial and Systems Engineering Students, Universidad de Monterrey, Nuevo León, México

### **ID 479 Digital Twin for Urban Spaces: an Application**

Diego M. Botín-Sanabria, Jorge G. Lozoya-Reyes, Roberto C. Vargas-Maldonado, Karen L. Rodríguez-Hernández, Ricardo A. Ramírez-Mendoza, Mauricio A. Ramírez-Moreno, Jorge de J. Lozoya-Santos, School of Engineering and Science, Mechatronics Engineering Department Tecnológico de Monterrey, Campus Monterrey Eugenio Garza Sada 2501 Sur, Monterrey, México

### **ID 485 Detection of Engineering Interest in Children Through an Intelligent System Using Biometric Signals**

Gustavo Olivas Martínez, Milton Osiel Candela Leal, Juan Carlos Ocampo Alvarado, Luis Fernando Acosta Soto, Diego Mauricio Botín Sanabria, Gladys Guadalupe Díaz Armas, Myriam Alanis Espinosa, Mauricio Adolfo Ramírez Moreno, Rubén Morales Menéndez, Ricardo Ambrocio Ramírez Mendoza, Jorge de Jesús Lozoya Santos, School of Engineering and Sciences, Tecnológico de Monterrey, Monterrey, Nuevo León, México

### **ID 487 Real-time Biofeedback System for Interactive Learning using Wearables and IoT**

Milton O. Candela-Leal, Juan M. García-Briones, Gustavo Olivas-Martínez, Rafael Abrego-Ramos, Gabriela J. Álvarez-Espinoza, Diego M. Botín-Sanabria, Karen L. Rodríguez-Hernández, José F. Pacheco-Quintana, Sofía Sampogna-Montemayor, Ruben Morales-Menendez, Ricardo A. Ramírez-Mendoza, Mauricio A. Ramírez-Moreno, Jorge de J. Lozoya-Santos, School of Engineering and Sciences, Tecnológico de Monterrey Monterrey, NL 64849, Mexico  
Juan C. Tudón-Martínez. School of Engineering and Technologies, Universidad de Monterrey, San Pedro Garza García, NL 66238, Mexico

### **ID 019 IIoT and Assisted Reality: Re-Shaping Traditional Robotic Cells**

E. N. Finley, S. M. DeWildt, N. A. MacArthur, Z. A. Rougeau, and E. I. Sarda, School of Engineering and Technology, Lake Superior State University Sault Sainte Marie, MI 49783, USA

**1:00 – 2:45 pm, WEDNESDAY**

**Doctoral Dissertation Competition**

**Breakout Room 2 - Onsite**

Session Chair: Dr. David Novella. Mechanical and Electrical Engineering, Universidad de Monterrey

### **ID 390 The effect of Organizational Culture Dimensions on Work Engagement and Burnout during COVID-19 pandemic**

Cynthia Karyna López-Botello, Adriana Segovia-Romo and Joel Mendoza-Gómez, Facultad de Contaduría Pública y Administración Universidad Autónoma de Nuevo León, Nuevo León, México

### **ID 178 Finding the path to smart mobility: Design of bike routes for university districts**

Daniela Ocaciones Mejía, Escuela de Ingeniería y Ciencias, Tecnológico de Monterrey, Monterrey, México  
José Ignacio Huertas Cardozo, Escuela de Ingeniería y Ciencias, Tecnológico de Monterrey, Monterrey, México  
Monica Moreno, Decision Sciences Department, MacEwan University, Edmonton, Canada



Juan Alberto Estrada García, Ingeniería en Gestión Empresarial, Universidad de Monterrey, Monterrey, México

**ID 418 A Framework to Foster Innovation-Driven Enterprises Creation in the University, the Case of Monterrey Region in Mexico.**  
Alejandro Téllez Girón Barrera and David Güemes Castorena, School of Engineering and Sciences, Tecnológico de Monterrey, Monterrey, NL 64849, Mexico

**1:00 – 2:45 pm, WEDNESDAY****Smart Mobility and Smart Cities****Breakout Room 3 - Onsite**

Session C Dr. Marta Sylvia del Río. Computer Science and Industria Engineering. Universidad de Monterrey

**ID 065 Configuration of electric vehicles for specific applications from a sustainable perspective**

José Ignacio Huertas, Antonio E. Mogro and Juan P. Jimenez, School of Engineering and Science, Tecnológico de Monterrey, Monterrey, Mexico

**ID 168 Methodology to assess sustainable mobility in LATAM cities**

José I. Huertas, Oscar S. Serrano, Antonio E. Mogro, and Duván A. Alvarado, School of Engineering and Science, Tecnológico de Monterrey, Monterrey, Mexico

Sonja Stöffler, Institute of Human Factors and Technology Management IAT, University of Stuttgart, Stuttgart, Germany

Trinidad Fernández, Fraunhofer Institute for Industrial Engineering IAO, Stuttgart, Germany

Xanin García and Roberto Castañeda, Instituto Municipal de Planeación Saltillo-IMPLAN, Saltillo, México

**ID 198 An integrated and comprehensive tool to assess urban mobility strategies**

Jose I. Huertas and Maria E. Huertas, School of Engineering and Science, Tecnológico de Monterrey, Av. Garza Sada 2501, Mexico

**ID 215 Making Monterrey an example of sustainable mobility based on electric bicycles**

José Ignacio Huertas, School of Science and Engineering, Tecnológico de Monterrey, Monterrey, NL 64849, México

David Mastrascusa, School of Science and Engineering, Tecnológico de Monterrey, Monterrey, NL 64849, México

**ID 483 Use of Technology for Better Understanding of Cities**

Karen L. Rodríguez-Hernández, Ana L. Gaxiola-Beltrán, Jorge Narezo-Balzaretti, Mauricio A. Ramírez-Moreno, Ricardo A. Ramírez-Mendoza, Jorge de J. Lozoya-Santos, School of Engineering and Sciences, Tecnológico de Monterrey, Campus Monterrey

Eugenio Garza Sada 2501 Sur, Monterrey, Mexico

**ID 489 Conscious Mobility for Urban Spaces Application**

Jorge G. Lozoya-Reyes, Roberto C. Vargas-Maldonado, Mauricio A. Ramírez-Moreno, Jorge de J. Lozoya-Santos, School of Engineering and Science, Mechatronics Engineering Department, Tecnológico de Monterrey, Campus Monterrey, Eugenio Garza Sada 2501 Sur, Monterrey, Mexico

**Onsite Poster Competition – Display for the whole conference****ID 564 Statistical Analysis Methods changed from Traditional to a Continuous Annealing Heat Treatment in a Copper Wire Drawn Machine**

Francisco Antonio Perales Carballedo, UPAEP University, México

José Luis Martínez Flores, UPAEP University, México

**1:00 – 2:45 pm, WEDNESDAY****Global Engineering Education I****Room 5 Virtual**

Session Chair: Professor Eldon G. Caldwell, University of Costa Rica

1:00 – 1:20 (Wednesday, November 3)

Alma Gonzalez, Ph.D.

Principal Consultant

STRATHA Learning Corporation, Mexico

University-Industry Collaboration on Engineering Workforce Training and Development: The Case of the Mexican Aerospace Industry

1:20 – 1:40 (Wednesday, November 3)

Dr. Gulnara Abitova

Associate Professor, Business-Trainer, Scientist Advisor, and Researcher

Astana IT University (Nur-Sultan) and Almaty Management University (AlmaU)

Nur-Sultan, Kazakhstan

1:40 – 2:00 (Wednesday, November 3)

Adedeji B. Badiru, Ph.D., PE, PMP, FIIE

Adedeji BadiruDean, Graduate School of Engineering and Management

Professor of Systems Engineering

AFIT/EN, Air Force Institute of Technology, Wright-Patterson Air Force Base

Dayton, Ohio, USA

2:00 – 2:20 (Wednesday, November 3)

Prof Hodson Makurira

Dean, Faculty of Engineering

University of Zimbabwe

Harare, Zimbabwe

Industry 4.0 Education in Zimbabwe

2:20 – 2:40 (Wednesday, November 3)

Professor Eldon G. Caldwell Marin, Ph.D., Sc.D, Dr.Ed.  
Director, Industrial Engineering Department, Engineering School  
University of Costa Rica, San Jose, Costa Rica

Theoretical socio-educational foundations of the labor insertion of people with disabilities in industrial environments: how to achieve more inclusive industrial environments?

2:40 – 3:00 (Wednesday, November 3)

Dr. Ana Julia Acevedo Urquiaga  
Docente-investigador, Directora Grupo Investigación Desarrollos Industriales y SST  
Fundación Universitaria San Mateo  
Bogota, D.C., Capital District, Colombia

Teaching Industrial Engineering in the post-pandemic

### 1:00 – 2:45 pm, WEDNESDAY

### Graduate Student Paper Competition

### Room 6 Virtual

Session Chair: Ekatherine Bojórquez, Physics and Mathematics Department, Universidad de Monterrey

#### ID 208 Bond Graphs for Manufacturing Control: Model's Improvement

Arthur Sarro Maluf, Production Engineering Department, Federal University of São Carlos, São Carlos, Brazil  
Juliana Keiko Sagawa, Production Engineering Department, Federal University of São Carlos, São Carlos, Brazil  
Maíra Martins Da Silva, Mechanical Engineering Department, University of São Paulo, São Carlos, Brazil

#### ID 018 The Optimization of an Electric Vehicle (EV) for Improved Range

Douglas W.E. Ferrier, College of Technology, Indiana State University, Terre Haute, IN 47809, USA  
Patrick Appiah-Kubi, Program Director, Cloud Computing & Computer Networking, Cybersecurity Department, School of Cybersecurity & Information Technology, University of Maryland Global Campus

#### ID 186 Application of Lean Manufacturing tools to decrease non-conforming products in a zinc refinery

Alberto Flores-Pérez, Juan Quiroz-Flores, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Perú  
Iván De Fuentes Pérez, Independent mechanical project consultant, Industrial Engineering Program, University of Applied Sciences, Perú

#### ID 195 Increasing Profitability Through the Implementation of an Integrated BSC-OKR Model in a Digital Agency: The Peruvian Case

Iyari Rojas-Chipana, Nicolas Aguilar-Pelizzoli, Juan Carlos Quiroz-Flores, Martín Collao-Díaz and Alberto Flores-Perez, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Perú

#### ID 336 Measuring the correlation of service expectations of travelers in selected international KSA airports through Bilingual Sentiment and Clustering Analysis

Haya Altajel and Faisal Alotaibi, Industrial Engineering Department, Alfaisal University, Riyadh, Saudi Arabia

#### ID 295 The convergence of Digitalisation and Quality in a changing world

Oshea Roopnarian, Durban University of Technology, Durban Metro, KwaZulu-Natal, South Africa

#### ID 515 Efficient Cumulative Sum Chart for Monitoring Fraction Nonconforming

Fathy Alkhatiba, Salah Hariydyb, Mohammad Shamsuzzamanc, Imad Alsyoufd, Department of Industrial Engineering and Engineering Management  
University of Sharjah Sharjah, UAE  
Ahmed Maged, Department of Systems Engineering and Engineering Management, University of Hong Kong Kowloon, Hong Kong, China

### 1:00 – 2:45 pm, WEDNESDAY

### Industry 4.0

### Room 7 Virtual

Session Chair: Isabel C. Elizondo, Physics and Mathematics Department, Universidad de Monterrey

#### ID 183 Information Systems in Digital Transformation: Practical case in an automotive industry company and CSF

Ana Inês Ribas, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, Aveiro, Portugal  
Leonor Teixeira, Institute of Electronics and Informatics Engineering of Aveiro (IEETA), Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro 3810-193, Aveiro, Portugal

#### ID 209 Digitizing a Daily Continuous Improvement System: A Practical Case in a Portuguese Company

Luís Franco, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, Aveiro Portugal  
Juliana Salvadorinho, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, Aveiro Portugal  
Leonor Teixeira, Institute of Electronics and Informatics Engineering of Aveiro (IEETA), Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, Aveiro Portugal

#### ID 217 Supporting digital transformation using BPM: Proposal of a digital tool

Márcia Silva, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, Aveiro, Portugal  
Maria João Rosa, Centre for Research in Higher Education Policies (CIPES), Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro 3810-193, Aveiro, Portugal  
Leonor Teixeira, Institute of Electronics and Informatics Engineering of Aveiro (IEETA), Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro 3810-193, Aveiro, Portugal

**ID 466 Investigating the Applicability of 4IR technologies in the Foundry Industry – A South African case**

Yvonie N. Mawane and Robert P. Mutyavavire, Department of Mechanical and industrial Engineering, University of Johannesburg, South Africa

**ID 119 Possible Solutions Industry 4.0 Offers To Improve The Productivity Of Apparel Industry During COVID-19 Pandemic: A Dynamic Capabilities View**

Piyumi Nisansala and Amila Withanarachchi, Department of Industrial Management, Faculty of science, University of Kelaniya, Sri Lanka

**ID 317 Industry 4.0 Maturity as a Moderator of Industry 4.0's Impact on Company Financial Performance**

Hong Long Chen, Department of Business and Management, National University of Tainan, Tainan, 70005, Taiwan

**1:00 – 2:45 pm, WEDNESDAY****Modeling and Simulation****Room 8 Virtual**

Session Chair: Ayax Santos. Physics and Mathematics Engineering Department, Universidad de Monterrey

**ID 047 Modeling of process parameters effect on draw force during copper wire drawing**Sunday Joshua Ojolo, Mechanical Engineering Department, University of Lagos, Akoka-Yaba, Lagos, 100213, Nigeria  
Lawson Tom Udonsek, Mechanical Engineering Department, Federal University of Petroleum Resources, Effurun, 1221, Nigeria**ID 020 The Use of Electric Cars in Short-Notice Evacuations: A Case Study of California's Natural Disasters**

Roxanne Peterson and Mohamed A. Awwad, Industrial and Manufacturing Engineering Department, California Polytechnic State University, San Luis Obispo, San Luis Obispo, CA 93407, USA

**ID 087 Simulation Improves Service and Operations at a Franchise Resale Store**

Caitlin Pethers, Marie Ruesga, Parker Moesta, and Edward J Williams, Business Analytics, College of Business, University of Michigan – Dearborn Dearborn, MI, 48126, USA

**ID 135 Optimization of the Signal Noise Ratio index using Simultaneous Perturbation Stochastic Approximation Algorithm**Juan Carlos Castillo García, Jesús Everardo Olguín Tiznado, Faculty of Engineering, Architecture, and Design, Autonomous University of Baja California, Carretera Transpeninsular Ensenada - Tijuana No. 3917 Colonia Playitas, 22860 Ensenada, Baja California México.  
Jorge Luis García Alcaraz, Dept. of Industrial Engineering and Manufacturing, Autonomous University of Ciudad Juárez, Ciudad Juárez, México  
Arturo Realyvasquez Vargas, Department of Industrial Engineering, Tecnológico Nacional de México/I.T. Tijuana, Tijuana, Baja California, México  
Karina Cecilia Arredondo Soto, Chemical Sciences and Engineering Faculty, Universidad Autónoma de Baja California  
Calzada Universidad 14418, Parque Industrial Internacional, Tijuana, Baja California 22390, México**1:00 – 2:45 pm, WEDNESDAY****Operations Management****Room 9 Virtual**

Session Chair: Aminta Garza, Physics and Mathematics Department, Universidad de Monterrey

**ID 137 A layout design using a production line balancing approach**Marlene Brás, Department of Economics, Management, Industrial Engineering and Tourism, University of Aveiro, Aveiro, Portugal  
Ana Moura, Department of Economics, Management, Industrial Engineering and Tourism, GOVCOPP – Systems for Decision Support Research Group, University of Aveiro, Aveiro, Portugal**ID 120 The Impact of Customer Loyalty and Satisfaction on Performance at a Lighting Company**

Khathutshelo Mushavhanamadi, M. F. Hlengani, Department of Quality and Operation Management, University of Johannesburg, South Africa

**ID 121 The Impact of Project Governance on Project Delivery In The Enterprise Project Management Office Within South African Bank**

Khathutshelo Mushavhanamadi, N. Phatlhane, Department of Quality and Operation Management, University of Johannesburg, South Africa

**ID 460 A Guideline to Improve the Business Continuity in the New Normal (Covid-19) through Human Resource Management: Case of Sri Lankan Apparel Industry**

Gowsiga Mahendrarajah, Department of Building Economics, University of Moratuwa, Moratuwa, Sri Lanka

**ID 389 On the Assessment of Neutral Theory via Applying MaxEnt to the Analysis of Barro Colorado Island Species Abundance Data**

Damian Musk, Stanford University Online High School, California, United States

**November 3, 2021 (Wednesday) - Session: 3:00 – 2:45 pm****3:00 – 4:45 pm, WEDNESDAY****Plenary Session - II****Ballroom 1a**

Session Chair: Jenny Diaz

3:00 - 3:30 pm, Wednesday, November 3 - Plenary IV

Ing. Saul Marengo  
Senior Vice-president  
Neoris

Become an Intelligent Enterprise

3:40 - 4:10 pm, Wednesday, November 3 - Plenary V

Ing. Berenice Navarro  
Engine Systems & HVAC Project Responsible  
Ciudad de México



Design for Manufacturing and Assembly in the Automotive Industry

4:15 - 4:45 pm, Wednesday, November 3 - Plenary VI

Ing. Alejandro Villarreal  
Experia Group  
Director, Commercial Operations & Partner Experience

eCommerce, Analysis of Users' Behavior in Latin America and how to attract them

**3:00 – 4:45 pm, WEDNESDAY**

**Panel 2**

**Ballroom 1b**

## **Panel: Reinventing the local Automotive Industry towards Electromobility**

Partner: CLAUT

Panel chair / Moderator: Mónica Rodríguez

### **Panelists:**

Manuel Valdés Aguirre, Questum	Joan Hinojo, Circontrol	Ramiro Montero C., Nemak
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**3:00 – 4:45 pm, WEDNESDAY**

**Undergraduate Research Competition**

**Breakout Room 1 - Onsite**

Session Chair: Elizabeth Guitérrez. Computer Science and Industrial Engineering. Universidad de Monterrey

### **Undergraduate Research Competition**

#### **ID 272 The Incorporation of Eco-Friendly Light Vehicles in Logistics Distribution Models: A Systematic Review**

Sebastián Zazueta-Nassif, Roberto Galarza-Tamez, Vicente Montemayor-Villarreal, Industrial and Systems Engineering, Universidad de Monterrey  
San Pedro Garza García, Mexico  
Jenny Díaz-Ramírez, School of Engineering and Technologies, Universidad de Monterrey, San Pedro Garza García, Mexico

#### **ID 274 Discrete Choice Models for Transportation Mode Choice: A Systematic Literature Review**

Juan Estrada-García, Juliana Figueroa, Ezequiel González, Jenny Díaz-Ramírez, Department of Engineering, Universidad de Monterrey  
San Pedro Garza García, Mexico

#### **ID 488 Digital Twin for a Vehicle: ElectroBus Case Study**

Diego M. Botín-Sanabria, Diego A. Santiesteban-Pozas, Guillermo Sáenz-González, Ricardo A. Ramírez-Mendoza, Mauricio A. Ramírez-Moreno, Jorge de J. Lozoya-Santos, School of Engineering and Science, Mechatronics Engineering Department, Tecnológico de Monterrey, Campus Monterrey, Eugenio Garza Sada 2501 Sur, Monterrey, Mexico

#### **ID 547 Resumen: Act 4 Marco Teórico Proyecto: Uwine**

Eduardo Guajardo, ITESM, Monterrey, Nuevo Leon, Mexico

#### **ID 553 Purview of the Baseline's Construction for Vehicle Fuel Economy and its Statistical Limitations**

Samantha Villarreal-Cavazos, Mariana Luis-González, Miguel Camacho-Assad and Jenny Díaz, Industrial and Systems Engineering School  
University de Monterrey, San Pedro Garza García, NL 66238, México  
José I. Huertas and Antonio E. Mogro, School of Engineering and Science-EIC, Tecnológico de Monterrey, Monterrey, México

### **Senior Design Project Competition:**

#### **ID 021 Reciprocating sliding motion tribometer design**

Demófilo Maldonado Cortés, Dra. Laura Peña Parás, Mechanical and Electronics Department, University of Monterrey, Monterrey, México  
Lizbeth Pérez Alvizo, Yadira Lisette Rangel Acosta, Jesús Ricardo Puente Martínez, Mechanical Engineering Students, Universidad de Monterrey  
Monterrey, México

#### **ID 252 Quality, Productivity and Competitiveness**

Luz Maria Valdez-de la Rosa, Universidad de Monterrey, San Pedro Garza García, Nuevo Leon, Mexico

**3:00 – 4:45 pm, WEDNESDAY**

**Supply Chain and Logistics Competition**

**Breakout Room 2 - Onsite**

Session Chair: Dr. Martha Claudia. Physics and Mathematics Department. Universidad de Monterrey

#### **ID 144 Evaluation of the Feasibility of Centralization of Warehouses in the Construction Company VIDUSA**

Ana Paula Ocañas Morales, Brando M. Rodríguez Vallejo, Ricardo C. Lozano Cantú, Business Management Engineering, Industrial and Systems Engineering, Industrial and Systems Engineering, University of Monterrey, México  
Refugio Chávez Hernández, Doctorate in Supply Chain Management and Logistics, University of Monterrey, México

### **Human Factors and Ergonomics Competition**

#### **ID 057 Effects of Technological Factors and Mental Workload in Online Higher Education Professors on Their Academic Performance**

Arturo Realyvasquez Vargas, Department of Industrial Engineering, Tecnológico Nacional de México/I.T. Tijuana, Tijuana, Baja California, Mexico  
Karina Cecilia Arredondo Soto, Chemical Sciences and Engineering Faculty, Universidad Autónoma de Baja California, Calzada Universidad 14418, Parque Industrial Internacional, Tijuana, Baja California 22390, Mexico

Jorge Luis García-Alcaraz, Department of Industrial Engineering and Manufacturing, Autonomous University of Ciudad Juárez, Ciudad Juárez, Chihuahua 32310, Mexico  
 Department of Industrial Engineering, Tecnológico Nacional de México/I.T. Ciudad Juárez, Ciudad Juárez, Chihuahua 32500, Mexico  
 José Roberto Díaz Reza, Division of Research and Postgraduate Studies, Tecnológico Nacional de México/I.T. Ciudad Juárez, Ciudad Juárez, Chihuahua 32500, Mexico  
 Jesús Everardo Olgin Tiznado, Faculty of Engineering, Architecture, and Design, Autonomous University of Baja California  
 Ensenada, Baja California, Mexico

### Innovative Idea Competition

#### ID 525 Walnut Oil: Variation in oxidation levels dependent on temperature in the extraction methodology

Brenda Jamilett Cruz Rodríguez, Monterrey Institute of Technology and Higher Education  
 Monterrey Institute of Technology and Higher Education, Andres Carvajal Morales, Monterrey Institute of Technology and Higher Education  
 Cielo A. Hernández Ricardez, Monterrey Institute of Technology and Higher Education  
 Abelardo Fuerte Beyer, Monterrey Institute of Technology and Higher Education  
 Renato Gallifa Quintanilla, Monterrey Institute of Technology and Higher Education  
 Jorge Hernández Sosa, Monterrey Institute of Technology and Higher Education  
 Diego Cárdenas, Monterrey Institute of Technology and Higher Education

#### ID 527 Comparison of the Elaboration of Hard Apple Cider with Fresh and Frozen Wort

Alejandra Villarreal Reyes, Ivana Karina Reyes Rubio, Mónica Pacheco Fernández, Eduardo Augusto Saldivar Balboa, Javier Rojas Sánchez, Oscar Eduardo Ruiz Adame and Marcelo Sauza Sada, Instituto Tecnológico y de Estudios Superiores de Monterrey Campus Monterrey  
 Monterrey, Nuevo León, México

### 3:00 – 4:45 pm, WEDNESDAY

### Operations Management

### Breakout Room 3 - Onsite

Session Chair: Pamela Palomo, Physics and Mathematics Engineering Department, Universidad de Monterrey

#### ID 089 Application of factorial analysis and multiple regression for the prediction of the stabilization time in furnaces in the heat treatment area in a metalworking company

Refugio Chávez Hernández, Doctorate in Supply Chain Management and Logistics, Popular Autonomous University of Puebla State, México.  
 José Luis Martínez Flores, Faculty of Industrial, Logistics and Manufacturing, Popular Autonomous University of Puebla State, México

#### ID 145 Strategic Value Propositions to Increase Competitiveness in a Tourism Cluster

Teresa Verduzco-Garza, Industrial Engineering, Engineering School, University of Monterrey UDEM, San Pedro Garza Garcia, NL, México  
 J. Gerardo Rodríguez Beltrán and José Pablo Nuño de la Parra, Popular Autonomous University of Puebla UPAEP Puebla, Pue, Mexico

#### ID 184 New developments on the geometry of the Traveling Salesperson Problem

Federico Trigos, EGADE Business School, Tecnológico de Monterrey, San Pedro Garza García, NL 66269, Mexico  
 Javier Gonzalez-Sanchez, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, Tempe, AZ 85281, USA  
 Adrian Ramirez-Nafarrate, Facultad de Ciencias Economicas y Empresariales, Universidad Panamericana, Zapopan, Jal 45010, Mexico

#### ID 457 Districting based on Stochastic Demands

Eduardo Díaz Medina, Facultad de Ingeniería, Universidad Panamericana, Zapopan, Jalisco 45010, Mexico  
 Samuel Nucamendi-Guillén, Facultad de Ingeniería, Universidad Panamericana, Zapopan, Jalisco 45010, Mexico  
 Rosa González Ramírez, Facultad de Ingeniería y Ciencias Aplicadas, Universidad De Los Andes, Santiago, Chile  
 Neale R. Smith-Cornejo, Industrial Engineering Department, Tecnológico de Monterrey, Nuevo León, 64670, Mexico

#### ID 100 Agile Management for Industrial Engineering Capstone Projects – Overcoming the COVID 19 challenge

Miguel Rocha, Edgar Barbosa and Carlos Gonzalez, Department of Industrial Engineering, Tecnológico de Monterrey, Querétaro, México  
 Cesar Vega, Life and Career Center, Tecnológico de Monterrey, Querétaro, México

#### ID 139 Application of Agile Methodologies for Design and Development of HealthTech products: Bio Testing Device

Catalina de León Santos, Sergio Eduardo Anaya Alvarez, Azael Jesus Cortes Capetillo, David Güemes-Castorena, Jorge de-J Lozoya-Santos  
 Escuela de Ingeniería y Ciencias, Tecnológico de Monterrey, Monterrey, N.L. 64849, México

#### ID 029 Estimate the Potential in the Harvest of the Sacha Inchi Seed in A 12-Hectare Crop, Using the Decision-Making Model Under Uncertainty

Luis Fernando Pedraza Ruiz, Department of Engineering, Fundación Universitaria de Popayán, Popayán, Colombia  
 Ingrid Milena Fernandez, Department of Engineering, Fundación Universitaria de Popayán, Popayán, Colombia

### 3:00 – 4:45 pm, WEDNESDAY

### Global Engineering Education II

### Room 5 Virtual

## Higher Education in Technology Management

Chair

Dr. M. Affan Badar, PhD, CPEM  
 Professor and Former Chair  
 Department of Applied Engineering and Technology Management  
 Indiana State University, Terre Haute, Indiana, USA

Co-Chair

Dr. A. Mehran Shahhosseini  
 Professor of Engineering/Mechanical Engineering Technology  
 Director, Ph.D. in Technology Management Program  
 Department of Applied Engineering and Technology Management  
 College of Technology  
 Indiana State University, Terre Haute, Indiana, USA

3:00 – 3:20 pm (Wednesday, November 3)

Dr. Arezou Harraf  
 Head of the Department of Business Studies  
 Box Hill College Kuwait

The importance of Technology Management for successful strategic direction within organizations

3:20 – 3:40 pm (Wednesday, November 3)

Dr. Timothy Anderson  
 Department Chair, Engineering and Technology Management Department  
 Portland State University, Portland, Oregon, USA

Models for Moving Technology Management Education Online during the Covid Era

3:40 – 4:00 pm (Wednesday, November 3)

Prof. Nesli Alp  
 Dean and Professor, College of Technology  
 Indiana State University, Terre Haute, Indiana, USA

The importance of higher education in Technology Management: Similarities and differences between Technology Management and Engineering Management

4:00 – 4:20 pm (Wednesday, November 3)

Aixi Zhou, PhD, PE, FSFPE  
 Chair and Professor, Dept. of Applied Engineering Technology  
 College of Science and Technology  
 North Carolina A&T State University, Greensboro, NC, USA

Equipping Technology Management Students with Advantageous Technical Skills

4:20 – 4:40 pm (Wednesday, November 3)

Shanthi Muthuswamy, Ph.D.  
 Professor, Department of Engineering Technology  
 Northern Illinois University, De Kalb, IL 60115, USA

Lean in Health Management

4:40 – 5:00 pm (Wednesday, November 3)

Kamal Shahrabi, Ph.D.  
 President and Dean of Faculty, RIT Kosovo (A.U.K)  
 Rochester Institute of Technology – RIT Global Campus  
 Dr. Shpetim Robaj, n.n., Germia Campus, Prishtina, Kosovo

Development of Technological Capacity

### 3:00 – 4:45 pm, WEDNESDAY

### Manufacturing

### Room 6 Virtual

Session Chair: Adrián Alcaraz, Civil and Management Engineering Department, Universidad de Monterrey

#### **ID 469 Development and Characterization of Cold Spray Coatings for Aerospace and Defense Manufacturing**

Albert Alejandro and Javier A. Ortega, Department of Mechanical Engineering, The University of Texas Rio Grande Valley, Edinburg, TX, USA  
 Anil Srivastava and Jianzhi Li, Manufacturing and Industrial Engineering Department, The University of Texas Rio Grande Valley, Edinburg, TX, USA

#### **ID 216 Design aspects of two-wheeler hybrid bike technology for sustainable environment.**

Iqra Ramzan, Mechanical Engineering Department, University of Management and Technology, Lahore 54000, Pakistan  
 Asim Amjad, Department of Industrial Engineering and Management, University of Punjab, 54000, Pakistan  
 Syed Bilal Ali Shah, Mechanical Engineering Department, University of Management and Technology, Lahore 54000, Pakistan

#### **ID 204 The Production Planning Practices and Techniques Impact on Operational Costs in South African Manufacturing industries**

Selowa Brian Tumiso, Quality and Operations Management Department, University of Johannesburg, South Africa  
 Bakama Eric Mikobi, Quality and Operations Management Department, University of Johannesburg, South Africa  
 Khathutshelo Mushavhanamadi, Quality and Operations Management Department, University of Johannesburg, South Africa



**ID 104 Factors Affecting Selection of Best Production Line in the Apparel Industry**

Madusha Edirisinghe, Department of Industrial Management, University of Kelaniya, Sri Lanka

Amila Withanarachchi, Senior Lecturer, Department of Industrial Management, University of Kelaniya, Sri Lanka

**ID 051 Investigation of Wastewater Discharges from Wet Coffee Processing Plant (WCPP) by using Aeration with Cyperus-ustulatus Plant Treatment Process**

Zerihun Asmelash Samuel, Faculty of Civil and Environmental Engineering, Jimma Institute of Technology, Jimma University, Jimma, Ethiopia

**3:00 – 4:45 pm, WEDNESDAY****Quality****Room 7 Virtual**

Session Chair: Berenice Cotri, Mechanical and Electrical Engineering Department, Universidad de Monterrey

**ID 404 Application of Delphi Technique in Predicting Total Quality Management Constructs in Ghanaian Construction Industry**

Samuel Kwame Ansah, Department of Building Technology, School of Built and Natural Environment, Cape Coast Technical University, Cape Coast, Ghana and Department of Construction Management and Quantity Surveying, Faculty of Engineering and Built Environment, University of Johannesburg, Johannesburg, Gauteng, South Africa

Clinton Ohis Aigbavboa and Didibhuku Wellington Thwala, Department of Construction Management and Quantity Surveying, Faculty of Engineering and Built Environment, University of Johannesburg, Johannesburg, Gauteng, South Africa

**ID 405 Influence of Organizational Factors on Total Quality Management Implementation in the Ghanaian Construction Industry**

Samuel Kwame Ansah, Department of Building Technology, School of Built and Natural Environment, Cape Coast Technical University, Cape Coast, Ghana

Department of Construction Management and Quantity Surveying, Faculty of Engineering and Built Environment, University of Johannesburg, Johannesburg, Gauteng, South Africa

Clinton Ohis Aigbavboa and Didibhuku Wellington Thwala, Department of Construction Management and Quantity Surveying, Faculty of Engineering and Built Environment, University of Johannesburg, Johannesburg, Gauteng, South Africa

**ID 205 The Impact of Adopting Total Quality management Practices on South African SME's Performance.**

Silima Tshenzhemo Neo, Quality and operations management Department, University of Johannesburg

Bakama Eric Mikobi, Quality and operations management Department, University of Johannesburg

Khathutshelo Mushavhanamadi, Quality and operations management Department, University of Johannesburg

**ID 230 Optimal Body-In-White Dimensional Quality Management in the Body Shop Area in a Car Manufacturing Plant**

Sivuyile E. Gayiya, Bheki Makhanya and Hannelie Nel, Faculty of Engineering and Built Environment, University of Johannesburg

Johannesburg, Gauteng, South Africa

**November 3, 2021 (Wednesday) - Session: 5:00 – 6:45 pm****5:00 – 6:45 pm, WEDNESDAY****Ballroom 1b****Relieve's Annual Meeting****5:00 – 6:45 pm, WEDNESDAY****Global Engineering Education III****Room 5 Virtual**

Session Chair: Berenice Cotri, Mechanical and Electrical Engineering, Universidad de Monterrey

5:00 – 5:20 pm (Wednesday, November 3)

Felipe Gómez Gallo

President at SPEED and Vice President for Student Affairs at IFEEES

Trainee, United Nations Institute for Training and Research (UNITAR)

Bogota, Colombia

5:20 – 5:40 pm (Wednesday, November 3)

Dr. Cristian Rusu

Profesor Titular/Full Professor

Coordinador "UseCV" – Grupo de Investigación en Interacción Persona – Computador/Head of the Research Group in Human-Computer Interaction "UseCV"

Escuela de Ingeniería Informática/School of Informatics Engineering

Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile

5:40 – 6:00 pm (Wednesday, November 3)

Wiljeana Glover, Ph.D.

Steven C. and Carmella R. Kletjian Foundation Distinguished Professor in Global Healthcare Entrepreneurship

Babson College

Boston, MA, USA

6:00 – 6:20 pm (Wednesday, November 3)

Prof. Dr. Nor Hasni Osman

Dean, UUM College of Business

Universiti Utara Malaysia, Sintok, Kedah, Malaysia

## Forecasting and Optimisation of Warehouse Shipment Demand

6:20 – 6:40 pm (Wednesday, November 3)

Mohd Helmy Abd Wahab, SMIEEE, MPECAMP, MIAEng, MIACSIT  
 Senior Lecturer & Academic Advisor, Department of Computer Engineering  
 Faculty of Electrical and Electronic Engineering  
 Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor

6:40 – 7:00 pm (Wednesday, November 3)

Dr. Md. Mizanur Rahman  
 PhD CEng Chartered Energy Engineer MEngNZ Member ASME  
 Senior Lecturer, School of Mechanical Engineering  
 University Technology Malaysia (UTM), 81310 Skudai, Johor Bahru, Malaysia

Title: 21st century energy engineering education: paradigm shift from technology-centred to multidisciplinary focused

**5:00 – 6:45 pm, WEDNESDAY****Human Factors and Ergonomics Competition****Room 6 Virtual**

Session Chair: Alina Batailler, Mechanical and Electrical Engineering, Universidad de Monterrey

**ID 432 Human Resource 4.0: A vision of a technological tool to assess and foster employee engagement**

Juliana Salvadorinho, Andreia Vitória, João Marques, Celeste Varum, Carlos Ferreira, Leonor Teixeira, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), Research unit in Governance, Competitiveness and Public Policies (GOVCOPP), Department of Social, Political and Territorial Sciences (DSPTS), Institute of Electronics and Informatics Engineering of Aveiro (IEETA)  
 University of Aveiro, Aveiro, Portugal

**ID 022 The Accuracy of Dynamic Simulation with the Use of TSB within JACK Siemens PLM software**

Xiaoxu Ji, Justo Hernandez, Emily Schweitzer and Alexa Littman, Department of Biomedical, Industrial and Systems Engineering  
 Gannon University, Erie, PA 16541, USA

**ID 006 Law Enforcement and Economic Growth**

Bernard Nainggolan, Wilson Rajagukguk, Faculty of Law and Faculty of Economics and Business, Universitas Kristen Indonesia  
 Jakarta 13630, Indonesia

**ID 426 Social Media Consumption Pattern Of Generation Z In Malang Towards The Preservation Of Malangan Masks**

Erika Danny Mulyadi, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University  
 Jakarta 11480, Indonesia  
 Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University,  
 Jakarta 11480, Indonesia

**ID 250 Ergonomic Design of Taho Cart with Shock Absorber System**

Jared Elias G. Baltazar, Marwin C. Bontes II, John Carl R. Narvarte, Gio Justin V. Reyes, Jaime Honra, PhD., School of Mechanical and Manufacturing Engineering, Mapua University, Muralla St., Intramuros, Manila, Philippines 1002  
 Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines

**5:00 – 6:45 pm, WEDNESDAY****Competitions****Room 7 Virtual**

Session Chair: Mario Claros, Mechanical and Electrical Engineering Department, Universidad de Monterrey

**Masters Thesis Competition****ID 397 The Stakeholders' Perceptions on Critical Success Factors for Construction Projects**

Gomolemo Lovell Phetlhu, Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, Gauteng, South Africa

**ID 128 Data Driven Supply Chain Optimization a Case Study**

Sandra N. Garza Almazán and Edgar M.A. Granda Gutiérrez, Department of Engineering, Universidad de Monterrey  
 Monterrey, Nuevo León 66238, México

**ID 610 Leadership of the Principal on Laboratory Elementary School of Unimuda Sorong in Improving the Quality of Education**

Manut Pratikno, Universitas Pendidikan Muhammadiyah Sorong, Indonesia, Institut Agama Islam Negeri (IAIN) Sorong, 98417, Sorong, Indonesia  
 Muhammad Rusdi Rasyid, Institut Agama Islam Negeri (IAIN) Sorong, 98417, Sorong, Indonesia  
 Ismail Suardi Wekke, Institut Agama Islam Negeri (IAIN) Sorong, 98417, Sorong, Indonesia, The Jusuf Kalla Research Center for Bugis Makassar  
 Cultural Studies, Universitas Muslim Indonesia

**Lean Six Sigma Competition****ID 270 Decrease wheelset failure alarm on Carajás Railroad**

Francisco das Chagas Barbosa Nascimento, Inspection and Predictive of Wagon Maintenance Management, Carajás Railroad to VALE S.A.  
 Avenida dos Portugueses, S/N Anjo da Guarda, CEP 65099 110 São Luís, MA – Brasil  
 Jardeles da Costa Nunes, Inspection and Predictive of Wagon Maintenance Management, Carajás Railroad to VALE S.A., Avenida dos  
 Portugueses, S/N Anjo da Guarda, CEP 65099 110 São Luís, MA – Brasil

**Senior Design Project Competition****ID 211 Process Improvement for High Precision Components at Medical Devices Company (MDC)**

Gamaliel Negrón Guzmán, Joshua Ríos Vachier and Jannette Pérez-Barbosa, Department of Engineering, Universidad Ana G. Méndez, Gurabo, Puerto Rico 00778, USA

### Supply Chain and Logistics Competition

#### **ID 200 Determination of Factors for Sustainability in Resilient Supply Chain in the Automotive Component Manufacture Industry**

Carolina Solís Peña, Valentín Lara Jiménez, Juan Manuel Hernández Ramos & Mónica Blanco Jiménez, Industrial Engineering Administration University of Nuevo Leon, San Nicolás de los Garza, Nuevo León, 66460, México

#### **ID 265 Raw Material Supply Configuration with Short Shelf Life in a Production Scenario MTS/MTO Minimizing Operational Risk and Cost**

Lucas Ramírez Ramírez, Engineering Magister Program Student, Universidad de Antioquia, Medellín, Colombia  
Carmen Elena Patiño Rodríguez, Industrial Engineering Department, Universidad de Antioquia, Medellín, Colombia  
Gloria Milena Osorno Osorio, Industrial Engineering Program, Unidad Central del Valle del Cauca, Tuluá, Colombia

#### **ID 146 Establishing Risks of Food Supply Chains for Small and Medium Food Manufacturing Companies in Malaysia**

Siti Aishah Hadawiah Ahmad and Mohd Nizam Ab Rahman, Department of Mechanical and Manufacturing, The National University of Malaysia Selangor, Malaysia  
Ariff Azly Mohamed, Department of Business and Management, Universiti Teknologi Mara, Selangor, Malaysia

#### **ID 613 LAC pilot project for green last-mile urban freight delivery services**

Prato Daniel1, Reinoso Camila1, 1Latin-American Center For innovation in Logistics, Bogotá, Colombia

### 5:00 – 6:45 pm, WEDNESDAY

### Energy Efficiency

### Room 8 Virtual

Session Chair: Faustino Zuñiga. Computer Science and Industrial Engineering. Universidad de Monterrey

#### **ID 470 Energy Saving in a Tobacco Curing Stove with the Use of Heat Recovery and Solar Energy**

Miguel Condorí, Federico Albasa, Ileana Cruz, Instituto de Investigaciones en Energía no Convencional (INENCO), Universidad Nacional de Salta (UNSA), Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Av. Bolivia 5150, A4408FVY, Salta, Argentina

#### **ID 050 Rural Electrification Electrifications: Sustainable Energy Solutions with a focus on Biomass Energy**

Miguel Meque Uamusse, Eduardo Mondlane University, Department of Chemical Engineering, Eduardo Mondlane University, Box 257, Maputo, Mozambique  
Samuel kucel, Busitema University, P O Box 236 Tororo, Uganda

#### **ID 035 Performance and emission characteristics of diesel-biodiesel-ethanol blends in a heavy-duty compression ignition engine at simulated high altitudes**

Julio C. Cuisano and Soin E. Puma, Mechanical Department of Engineering Faculty, Pontificia Universidad Católica del Perú, Lima, Perú

#### **ID 273 The Implementation of the Capable Solar Power Through Tackling Challenges: KZN Region**

Bantubenzani Nelson Mdlolo, Department of Industrial Engineering, Durban University of Technology, Durban, 4001, SA  
Oludolapo Akanni Olanrewaju, Department of Industrial Engineering, Durban University of Technology, Durban, 4001, SA

#### **ID 478 Economics of Small-Scale Power Generation from Renewable and Hybrid Sources**

Mohd Faiz Che Wahab, Md Mizanur Rahman, Aminuddin Saat, Hasan Mohd Faizal and Mazlan Abdul Wahid, School of Mechanical Engineering, Faculty of Engineering, Universiti Teknologi Malaysia (UTM), 81310 Johor Bahru, Johor, Malaysia

#### **ID 600 Selection of Repair and Strengthening Methods Structure Powerhouse To Optimize Operational Activities**

Argya Jaganaputra, Bambang E Yuwono, Master Degree Faculty of Civil Engineering and Planning, Trisakti University, Jakarta, Indonesia

#### **ID 611 The Effect Of Investment Strategy And Risk Management On Bitcoin Online Trading In Bitcoin Investors, (Study on College Students in Bandung City, Indonesia)**

Budi Rustandi Kartawinata, Telkom University, Jalan Terusan Buah Batu, Bandung 40257, Indonesia, Business Administration  
Budi Santoso, Telkom University, Jalan Terusan Buah Batu, Bandung 40257, Indonesia, Business Administration  
Aldi Akbar, Telkom University, Jalan Terusan Buah Batu, Bandung 40257, Indonesia, Business Administration  
R. Susanto Hendiarto, Universitas Widyatama, Jl. Cikutra no 204 A Bandung 40124, Indonesia

### 5:00 – 6:45 pm, WEDNESDAY

### Engineering Management

### Room 9 Virtual

Session Chair: Gilberto Montes, Civil and Management Engineering. Universidad de Monterrey

#### **ID 218 A new model for identifying, capturing and transmitting knowledge: A proposal based on practical experience**

Luís Gomes, Department Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, 3810-193, Aveiro, Portugal  
Leonor Teixeira, Institute of Electronics and Informatics Engineering of Aveiro (IEETA), Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, 3810-193, Aveiro, Portugal

#### **ID 126 A Cost-Benefit Approach to Thermo-Processing Equipment Safety Regulation Analysis**

Motshumi Joseph Diphare, Hannelie Nel and Jan-Harm C. Pretorius, Postgraduate School of Engineering Management, University of Johannesburg Johannesburg, South Africa

#### **ID 406 Identification of External Risks Affecting the South African Mining Sector and Their Mitigation Strategies**

Moshopyadi Pretty Mashamba and Hannelie Nel, Post-Graduate School of Engineering Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

#### **ID 463 Product Launch Decision Making for Non-preemptive Product Development Process**



Adewole Mark Adegbola, Venkat Allada, Engineering Management and Systems Engineering Department, Missouri University of Science and Technology, Rolla, MO 65401, USA

**ID 480 Modelling and Mapping University Business Process level 2**

Bachtar H. Simamora, Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Wibowo Kosasih, Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480  
 Natalia, Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480  
 Rudi, Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480  
 Lily Leonita, Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480

**ID 574 Disability in the view of Buddhism**

Heru Widoyo 1 and Nuah P. Tarigan 1, 2

1 Character Building Development Center, Computer Science Department, School of Computer Science, Bina Nusantara University Jakarta, Indonesia

2 Universitas Pelita Harapan, Doctor of Research in Management in Education Leadership program, Jakarta, Indonesia

**ID 552 Analyzing the Economic Stability during COVID-19 Pandemic in Indonesia: The Moderating Role of Money Velocity**

Rico Nur Ilham and Yanita, Faculty of Economics and Business, Universitas Malikussaleh, Blang Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia

Irada Sinta, Faculty of Agriculture, Universitas Malikussaleh, Releut, Aceh Utara, 24355 Aceh, Indonesia

Monetarist Butar Butar, Maulana Majied Sumatran Saragih, Faculty of Economics and Business, Universitas Darma Agung, Medan, 20153 Sumatera Utara, Indonesia

Rodi Syafrizal, Sekolah Tinggi Ilmu Ekonomi Bina Karya, Tebing Tinggi, 20631 Sumatera Utara, Indonesia

Jumadi Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

## November 3, 2021 (Wednesday) - Session: 7:00 – 8:45 pm

**7:00 – 8:45 pm, WEDNESDAY**

**Undergraduate Student Paper Competition**

**Room 5 Virtual**

Session Chair: Dr. Md Mizanur Rahman, University Technology Malaysia

**ID 099 The Alternatives on Last Mile Delivery Logistics: Insights on Customers' Preferences** Bruna Meire Kuhl Gomes

Cassiana Teza, Gabriel Cassino, Rodrigo Luiz Gigante, Henrique Ewbank, Facens University, Sorocaba, SP, Brazil

**ID 046 Description of the Electrification and Drinking Water Processes in Non-Interconnected Zones (ZNI) and Construction of Explanatory Structures of these Processes in a Particular Community**

Iván David Sánchez, Maria Fernanda Flórez, Luisa Fernanda Jimenez, Laura Milena Cárdenas, Industrial Engineering Department, University of Antioquia, Medellín, Colombia

**ID 413 Collaborative model between Data Analytics and PDCA for service level improvement in environmental consulting SMEs** Juan

Carlos Quiroz-Flores and Martín Collao-Díaz, Faculty of Engineering and Architecture, Industrial Engineering Program, Universidad de Lima, Perú  
 Gianella Chavez-Osorio and Sebastian Guillen-Valdivia, Faculty of Engineering, Industrial Engineering Program, Universidad Peruana de Ciencias Aplicadas, Lima - Perú

**ID 330 Interpersonal Communication between Mother and Daughter to Inculting Feminism Values in "Enola Holmes" Film**

Felecia S Krismianto, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia

Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University Jakarta 11480, Indonesia

**ID 331 The Effectiveness Of Tourism Promotion In Bali By Influencers Using Tiktok**

Anak Agung Ayu Dwitha Vebby Nathasya, Communication Science Department, Faculty of Economics and Communication

Bina Nusantara University, Jakarta 11480, Indonesia

Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication

Bina Nusantara University, Jakarta 11480, Indonesia

**ID 222 Electromagnetic and Thermal Performances of Multi U and V Layer Magnet of Permanent Magnet Assistant Synchronous Motor for Electric Vehicles**

Bui Minh Dinh, Hanoi University of Science and Technology, Vietnam

**ID 459 An Adaptation of Industry 4.0: Modifying the Implemented Queuing System in Philippine Statistics Authority Applying Monte Carlo Simulation**

Matthew P. Solivio, Maria Angelica D. Bare, Francee Mae F. Castro, Kirstien Paola E. Robas, Rene D. Estember, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

**7:00 – 8:45 pm, WEDNESDAY**

**Undergraduate Research Competition**

**Room 6 Virtual**

Session Chair: Dr. Md Abul Bashar, IEOM Society

**ID 335 Distraction and Driving Behavior of Young Indonesian Drivers: An Exploratory Study**

Wina D. Oktavia, Manik Mahachandra, Excel Verlieson, Industrial Engineering Department, Faculty of Engineering, Diponegoro University, Semarang, Central Java 50269, Indonesia

**ID 276 SAFE: Smart Application for Emergency**

John Nicolo T. Cruz, Gabrielle Angelo D. Gabatin, John Gerick B. Gabunilas, and Gloren S. Fuentes, School of Information Technology, Mapua University, Makati City, Metro Manila, Philippines

**ID 277 Online Scheduling System for Doctors and Patients in a Hospital**

Marion Rylan Q. De Guzman, Jonn Louis N. Ordoñez, Ronald O. Somocierra, and Gloren S. Fuentes, School of Information Technology Mapúa University, Makati City, Metro Manila, Philippines

**ID 433 Analysis on Users Satisfaction in the Quality of Telemedicine Digitalization System between the Millennials and Generation Z in the Philippines**

Jovilyn Abarico, Obeaya Camota, Andrea Cumpa, Dianne Lizbeth Perico, Charish Jen Rala, Kenneth Salvante, Pamela Anne Mae Velasco Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City Cubao, Quezon City, Philippines

**ID 438 Redesigning an Inclusive Digital Contact Tracing Service Systems: User-Focused Phase of Design Thinking Approach** Javy

Denver K. Chan, Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, 1008, Philippines  
Ivan Floyd R. Flores, Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, 1008, Philippines  
Wilwyn G. Mendoza, Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, 1008, Philippines  
Kim Lyn B. Sanvodal, Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, 1008, Philippines  
Gabriel C. Bucu, Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, Philippines and Department of Industrial and Systems Engineering, De La Salle University, Taft Avenue, Manila, 1002, Philippines

**ID 439 Queuing Theory: A Case Study in Analyzing the Vaccination Service in Quezon City**

Christlyn Mae C. Valeriano, Charles Kristian K. Ilo, Maria Kathryn A. Illescas, Jan Aldrin V. Dahilig, Rene D. Estember, School of Industrial and Engineering Management, Mapúa University, Intramuros, Manila, Philippines

**7:00 – 8:45 pm, WEDNESDAY**

**High School STEM Competition**

**Room 7 Virtual**

Session Chair: Mahir Faysal, IEOM Society

**ID 069 Expanding Theories in Behavioral Psychology**

Samuel Feldman, Stanford Online High School, Redwood City, CA 94063, USA

**ID 071 Determining Senecio Elegans Population Size and Dispersion Patterns in order to Inform Volunteer Removal Efforts**

Tanisha Gupta, Stanford University Online High School, Redwood City, CA 94063, USA

**ID 072 Analysis of Autism Spectrum Disorder and Metrics of Eye Movement**

Ethan S. Yun, Stanford Online High School, Redwood City, CA 94063, USA

**ID 073 Relationship between Playing Video Games and Happiness**

Allie Lin, Stanford Online High School, Redwood City, CA 94063, USA

**ID 097 An Analysis of Visual Subitization Across Different Modes of Peripheral Vision**

Allie Lin, Stanford Online High School, Redwood City, CA 94063, USA

**ID 142 Analysis of the Correlation Between Imposter Syndrome and Grade Level of Online High School Students**

Ester Weinhardt, Stanford Online High School, Redwood City, 94063 CA

**ID 409 Determining Senecio Elegans Population Size and Dispersion Patterns in order to Inform Volunteer Removal Efforts**

Tanisha Gupta, Stanford University Online High School, Redwood City, CA 94063, USA

**ID 481 GMove: Gyroscopic Controlled Robotic Movement**

Raymond Yap, Valley Christian High School, 100 Skyway Drive, San Jose, CA, USA

**7:00 – 8:45 pm, WEDNESDAY**

**Graduate Student Paper Competition**

**Room 8 Virtual**

Session Chair: Dr. Hayder Zghair, Penn State Berks

**ID 374 The Analysis on Factors influencing the Use of Mobile Payment System Among Generation Z in Indonesia**

Kurnia Fajar Afgani, School of Business and Management, Institut Teknologi Bandung, Indonesia  
Dematria Pringgabayu, Politeknik Pajajaran ICB, Bandung, Indonesia  
Emilia Fitriana Dewi, School of Business and Management, Institut Teknologi Bandung, Indonesia  
Octaviani Ratnasari Santoso, Politeknik Pajajaran ICB, Bandung, Indonesia  
Zxavian Zebadia Simorangkir, School of Business and Management, Institut Teknologi Bandung, Indonesia

**ID 377 A Hybrid Artificial Neural Network and Logistics Regression Model for Fashion Sales Strategies Prediction**

Rifdah Zahabiyah and Andi Cakravastia, Industrial Engineering Program, Faculty of Industrial Technology, Bandung Institute of Technology, Bandung, Indonesia

**ID 392 Supplier Selection Criteria for E-Commerce Based Fashion SME's**

Yoan Thesia T and Andi Cakravastia, Industrial Engineering Program, Faculty of Industrial Technology, Bandung Institute of Technology, Bandung, Indonesia

**ID 354 The Key Factors to improve Thailand's Logistics System during the COVID-19 period**

Teerasak Charoennapharat and Poti Chaopaisarn, Graduate Program in Industrial Engineering, Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Chiang Mai 50200, Thailand, Excellent Center in Logistics and Supply Chain Management, Faculty of Engineering, Chiang Mai University, Chiang Mai 50200, Thailand

**ID 294 Request Management System of an Airline's Engineering Department: A Case Study**

Ronnie Dela Cruz; Grace Lorraine D. Intal, School of Industrial Engineering, School of Information technology, Mapua University, Intramuros Manila, Philippines

**ID 440 Experimental Analysis on Determination of Significant Factors in Growing Mung Bean Sprouts (Length) in a Home-Based Set Up (Non-Soil Germination)**

Ariel A. Salvador Jr., Department of Industrial and Systems Engineering, De La Salle University, Taft Avenue, Manila, 1002, Philippines, Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, 1008, Philippines  
Gabriel C. Bucu, Department of Industrial and Systems Engineering, De La Salle University, Taft Avenue, Manila, 1002, Philippines, Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, 1008, Philippines

**ID 497 Service Quality Assessment of Local Government Units' COVID Pandemic Response using Factor Analysis**

Gabriel C. Bucu, Department of Industrial and Systems Engineering, De La Salle University, Taft Avenue, Manila, 1002, Philippines and Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, 1008, Philippines  
Ariel A. Salvador Jr., Department of Industrial and Systems Engineering, De La Salle University, Taft Avenue, Manila, 1002, Philippines  
Department of Industrial Engineering, University of Santo Tomas, España Boulevard, Sampaloc, Manila, 1008, Philippines

**7:00 – 8:45 pm, WEDNESDAY****Doctoral Dissertation Competition****Room 9 Virtual**

Session Chair: Dr. Saso and Dr. Pandian

**ID 495 A Survey of Approaches to Describe Driving Patterns.**

Jessica Gissella Maradey Lázaro, Mechatronics Engineering Program, Universidad Autónoma de Bucaramanga, Santander, Colombia  
Jose Ignacio Huertas Cardozo, Mechanical Engineering Department, Tecnológico de Monterrey, Monterrey, Nuevo León, México

**ID 351 Real-world Vehicle Emissions in Mexico**

Antonio E. Mogro and José Ignacio Huertas, School of Engineering and Science, Tecnológico de Monterrey, Monterrey, Mexico

**ID 309 Religious Moderation and Information Communication Technology Dissemination: The Practice of Muhammadiyah Papua Through Online Campaign**

Budi Santoso, Universitas Muhammadiyah Malang, Indonesia, Universitas Pendidikan Muhammadiyah Sorong, Indonesia  
Ahsanul Inam and Abdul Haris, Universitas Muhammadiyah Malang, Indonesia  
Ismail Suardi Wekke, Institut Agama Islam Negeri (IAIN) Sorong, Indonesia, Asosiasi Dosen Insan Cita Indonesia, Indonesia, The Jusuf Kalla Research Center for Cultural Studies, Universitas Muslim Indonesia

**ID 417 Medical Surge Capability: An Intelligent Framework for Improving Hospital Emergency Department Operations**

Egbe-Etu Etu, Department of Marketing and Business Analytics, San Jose State University, San Jose, CA 95192, USA  
Leslie Monplaisir, Celestine Aguwa, Sara Masoud, Department of Industrial & Systems Engineering, Wayne State University, Detroit, MI 48202, USA  
Suzan Arslanturk, PhD, Department of Computer Science, Wayne State University, Detroit, MI 48202, USA  
Joseph Miller, MD, Department of Emergency Medicine, Henry Ford Hospital, Detroit, MI 48202, USA

**ID 474 Determining How Team Communication and Project Outcomes Evolve in A Midwestern Healthcare Company: A Case Study Approach**

Cindy L. Crowder, Indiana State University, Terre Haute, IN, United States

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**November 3, 2021 (Wednesday) - Session: 9:00 – 10:45 pm**

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**9:00 – 10:45 pm, WEDNESDAY****Undergraduate Student Paper Competition****Room 5 Virtual**

Session Chair: Dr. Md Mizanur Rahman, University Technology Malaysia

**ID 254 Information System Plan for Chew & Brew Milk Tea Company (A Case Study)**

Karina Dizon, Dave Pagaduan, David Quindoza, Raphael Tandoc, Grace Lorraine Intal, School of Information Technology, Mapúa University, Makati, NCR, Philippines

**ID 261 Information System Plan for West Corner Hotel (A Case Study)**

Milstein Rei Cadorniga, Ashly Mariel Cruz, Coleen Dela Cruz, Kathleen Suello, Grace Lorraine Intal, School of Information Technology, Mapúa University, Makati City, Philippines

**ID 262 Information Systems Plan for La Teacia Artisan Milk Tea (A Case Study)**

Noel D. Basañez, Jr., Angelica Rose D. Bauzon, Kathleen R. Santos, Tristan Andrei T. Saura, Grace Lorraine Intal, School of Information Technology, Mapúa University, Makati City, Philippines

**ID 098 A Systematic Review on Factors Affecting Remote Working Employees During the COVID-19 Pandemic**

Narmada Siyambalapitiya and Ruwan Wickramarachchi, Department of Industrial Management, University of Kelaniya, Sri Lanka

**ID 105 Investigating the Factors Affecting Lean Marketing Readiness in the Retail Sector in Sri Lanka**



Apoorwama Illanganthilake, Ruwan Wickramarachchi, Department of Industrial Management, University of Kelaniya, Sri Lanka

**ID 108 Challenges of Teleworking and their Effect on Knowledge Transferring**

Dumindi Wimalasiri and Amila Withanarachchi, Dept. of Industrial Management, Faculty of Science, University of Kelniya, Dalugama, Sri Lanka

**ID 223 RRU 5G 8T8R Heatsink Embedded Vapor Chamber and Heat pipe Assemblies**

Minh Dinh Bui, Hanoi University of Science and Technology, No 1, Dai Co Viet street, Hai Ba Trung district, Ha Noi  
Duc-Thinh Nguyen, Department of Mechanical Engineering, Viettel High Technology Industries Corporation, Hanoi, Vietnam.

**9:00 – 10:45 pm, WEDNESDAY**

**Undergraduate Research Competition**

**Room 6 Virtual**

Session Chair: Dr. Md Abul Bashar, IEOM Society

**ID 450 Goal Programming Approach: Application in a Cake Business**

Lorenzo Caday, Krisanta Ana Draculan, Jerome Liwanag, Wajid Mariño, Rene Estember, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines

**ID 452 The Application of Decision Theory in Picking Delivery Courier Services in the Philippines**

Alliah Jane S. Agunos, Carl Louie N. Cruz, Cedric F. Reprado, Henrie Louis P. Subido, Rene D. Estember, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines

**ID 458 An Application of Decision Analysis on the Strategy of Professors with the Absorption of Knowledge Between Face-to-Face and Online Learning**

Julianne Mikhaella Delos Reyes, Louis Miguel Dural, Julia Sofie Mangaoang, Gaea Marithe Victor, and Rene Estember, School of Industrial Engineering and Engineering management, Mapua University, Muralla St. Intramuros, Manila 1002 Philippines

**ID 464 Application of Dynamic Programming to Sweet Delights: A Market Research for Online Baked Products**

James Brylle C. Foz, Martin James D. Olan, Daniel N. Perez, Christian Jay E. Sesnorio, Rene D. Estember, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

**ID 278 Acoustic Noise And Force Reduction of High Speed Switched Reluctance Motor by Rotor Designs**

Bui Minh Dinh, Hanoi University of Science and Technology

**9:00 – 10:45 pm, WEDNESDAY**

**Business Management**

**Room 7 Virtual**

Session Chair: I Putu Artaya, Departement of Management and Business, Narotama University

**ID 293 Mediating Effect of Financial Performance on The Effect Green Innovation on Firm Value**

Hidayatul Khusnah, Mardiyah Anugraini, and Riyan Sisiawan Putra, Faculty of Business Economics and Digital Technology, Universitas Nahdlatul Ulama Surabaya, Surabaya 60237, East Java, Indonesia  
Vera Putri Fabiola, Student Departemen of Accounting, Faculty of Business Economics and Digital Technology, Universitas Nahdlatul Ulama Surabaya, Surabaya 60237, East Java, Indonesia

**ID 349 Strengthening the Competitiveness of Micro Enterprises Using a Categorical Test Approach With Syntax Method**

I Putu Artaya, Departement of Management and Business, Narotama University  
Mohammad Roesli, Departement of Law, Universitas Merdeka Surabaya  
Sulistiyani Eka Lestari, Departement of Law, Sunan Bonang University  
Nurmawati, Departement of Industry, Universitas 45 Surabaya  
Setya Haksama, Department of Public Health, Airlangga University  
Devita Anggraini Lestari, Department of Public Health, Airlangga University

**ID 375 Evaluation and Digital Marketing Platform Together to Develop the Organizational Agility of Cooperatives in IndonesiaEnggal**

Sriwardiningsih, Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480  
Agung Sudjatmoko, Business Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
Mohamad Idris Laena, Indonesian Cooperative Council (DEKOPIN), Expert Council of the Indonesian Cooperative Council

**ID 380 A Review of Strategic Management Research in Indonesia**

Agung Purnomo and Febby Candra Pratama, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta 11480, Indonesia  
Nur Afia and Elsa Rosyidah, Institute for Research and Community Services, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
Rini Safitri, School of Management, National Central University, Taoyuan City 320317, Taiwan (R.O.C.)

**ID 398 Product Quality, Price, Product Involvement, Atmosphere and WOM Effect on Purchase Intention at Starbucks Coffee Hayam Wuruk Drivethru Jakarta, Indonesia**

Steven Phan and John Tampil Purba, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia  
Sidik Budiono, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia  
Wilson Rajagukguk, Department of Management Faculty of Economics and Business, Universitas Kristen Indonesia, Jakarta, Indonesia

**ID 399 Strategy of Work Attitude In Improving High Performance Work System With Extra Role Behavior As A Variable Mediator**

Sry Rosita, Andang Fazri, Sumarni, Universitas Jambi, Jambi

**ID 577 Analysis of Risk Based Capital and EWS as Early Warning of Risk Factors in Sharia Life Insurance Companies and Sharia Life Insurance Units in Indonesia**

Firly Irhamni and Denis Fidhita K., Department of Management, Faculty of Economic Business and Technology Digital, Universitas Nahdlatul Ulama Surabaya, Surabaya Indonesia

**ID 578 Macroeconomic Determinants of NAV, (Composite Stock Price Index as Variable Z)**

Firly Irhamni, Vina Safiyyah, and Riyan Sisiawan Putra, Department of Management, Faculty of Economics and Business, Universitas Nahdlatul Ulama Surabaya, Surabaya, Indonesia

**9:00 – 10:45 pm, WEDNESDAY**

**E-Business/E-Service**

**Room 8 Virtual**

Session Chair: Ade Fadli Fachrul, Character Building Development Center, Bina Nusantara University, Jakarta, Indonesia

**ID 063 E-Strategy: A Bibliometric Network Visualizing of Publication Over the Past Four Decades**

Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta 11480, Indonesia

Nur Asitah, Institute for Research and Community Services, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

Elsa Rosyidah, Environmental Engineering Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

Inayatul Maula, Elementary Education Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

Alifah Dian Rahmania, Master of Industrial Engineering Department, Universitas Sebelas Maret, Surakarta 57126, Indonesia

**ID 187 Technology Acceptance Model to Solve Mobile Payment Problem for SMEs**

Inayatulloh, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

Yenny Desnelita, Institut Bisnis dan Teknologi Pelita, Pekanbaru, Indonesia

Eka Sasmita Mulya, Civil Engineering, Politeknik Negeri, Jakarta, Depok Indonesia

Hendra Alianto, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia

Rivaldhy N. Muhammad, Study Program of Law, Faculty of Law, Social and Political Sciences, Terbuka University, Indonesia

**ID 188 Technology Acceptance Model to Solve E-Learning Problem for Teacher in School**

Inayatulloh, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

Yenny Desnelita, Institut Bisnis dan Teknologi Pelita, Pekanbaru, Indonesia

Eka Sasmita Mulya, Civil Engineering, Politeknik Negeri, Jakarta, Depok Indonesia

Hendra Alianto, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia

**ID 189 Human Resources Management System Model Base on Open Source and Cloud Computing for SMEs**

Inayatulloh, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

Rajiv Dharma Mangruwa, Communication and Business-Telkom University, Bandung, Indonesia, Azman Hashim International Business School – University of Technology Malaysia, Malaysia

Sugeng Riyanto, STIE Pertiwi, Bekasi, Indonesia

**ID 314 Factors that Determine Repeat Purchases on E-Commerce**

Inayatulloh, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

Enggal Sriwardiningsih, Management Department, Binus Business School, Bina Nusantara University, Jakarta, Indonesia,

Hendra Alianto, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

Sugeng Riyanto, STIE Pertiwi, Bekasi, Indonesia

Destiana Kumala, Sekolah Tinggi Ekonomi Bisnis Islam Syaria Bina Mandiri, Jakarta, Indonesia 11480

Rivaldhy N. Muhammad, Study Program of Law, Faculty of Law, Social and Political Sciences, Open University, Indonesia

**ID 329 Improving SMEs Knowledge with Adoption Knowledge from Social Media**

Inayatulloh, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

Indra Kusumadi Hartono, Information Systems Department, Bina Nusantara University, Jakarta, Indonesia 11480

Ade Fadli Fachrul, Character Building Development Center, Bina Nusantara University, Jakarta, Indonesia

**ID 347 Analyzing Online Purchase Intentions in Fashion E-Commerce in Indonesia**

Inayatulloh, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

Enggal Sriwardiningsih, Management Department, Binus Business School, Bina Nusantara University, Jakarta, Indonesia,

Sugeng Riyanto, STIE Pertiwi, Bekasi, Indonesia

Destiana Kumala, Sekolah Tinggi Ekonomi Bisnis Islam Syaria Bina Mandiri, Jakarta, Indonesia 11480

Yenny Desnelita, Institut Bisnis dan Teknologi Pelita, Pekanbaru, Indonesia

Maisyarah Rahmi Hasan, Islamic Economic Law Department, Faculty of Sharia, Universitas Islam Negeri Sultan Aji Muhammad Idris Samarinda,

Mahaning Indrawaty Wijaya, Information Systems Department, School of Information Systems, Bina Nusantara University, Jakarta, Indonesia 11480

Maryani, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

Wilda Susanti, Institut Bisnis dan Teknologi Pelita Indonesia

**9:00 – 10:45 pm, WEDNESDAY**

**Supply Chain Management**

**Room 9 Virtual**

Session Chair: Adhy Firdaus, STIE (College of Economics) STIE 'Ganesha' Jakarta, Indonesia

**ID 378 Supply Chain Performance Measurement using SCOR**

Md. Minhajul Islam and Md. Abdullah Mia, Industrial and Production Engineering Department, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

**ID 268 Two Decades of Closed-loop Supply Chain: A Bibliometric Analysis**

Imnatila Pongen, Department of Operations Management, Indian Institute of Management Ranchi, Jharkhand-834008, India

**ID 461 Building a Two-Decade Traditional Retail Strategy Research Theme Map Using a Bibliometric Approach**

Febby Candra Pratama and Hera Rachmahani and Mardhatillah Shanti and Riesta Devi Kumalasari, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta 11480, Indonesia

**ID 326 Comparison study between CB-SEM and PLS-SEM for sustainable supply chain innovation model**

Ahmed El Maalmi and Laila El Abbadi, Engineering Sciences Laboratory, National School of Applied Sciences, Ibn Tofail University, Kenitra, Morocco  
 Kaoutar Jenoui, Laboratory Smartilab, Moroccan School of Engineering Sciences, EMSI, Rabat, Morocco

**ID 227 Technology innovation in supply chain logistics: A Structured Literature Review (2003-2019)**

Hilda Kundai Chikwanda and Andile LN Zulu, Graduate School of Technology Management (GSTM), Faculty of Engineering, Built Environment and Information Technology, University of Pretoria, Pretoria, South Africa

**ID 102 A Systematic Review on Challenges towards Circular Economy in the Sustainable Agri-Food Supply Chain of Sri Lanka**

R.M.H.C. Rathnayake and Amila Withanarachchi, Department of Industrial Management, University of Kelaniya, Daluagama, Sri Lanka

**ID 609 An Investigation of Perception and Socialization of Financial Accounting Standards (SAK) among Micro, Small and Medium Enterprises (MSMEs) Actors in Pekalongan District, Indonesia**

Muti Alfiyah and Imam Prayogo, Diploma of Financial Accounting, Faculty of Vocational School, PSDKU Universitas Diponegoro, Kajen, Pekalongan, 51161 Jawa Tengah Indonesia  
 Daljono, Department of Accounting, Faculty of Economics and Business, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia  
 Teuku Afrizal, Department of Public Administration, Faculty of Social Science and Political Science, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia

**ID 580 The effect of Covid-19 on Micro and Small Business Community: A Study of the Micro, and Small Business Community in the Covid-19 Pandemic in Jakarta Area.**

Adhy Firdaus, STIE (College of Economics) STIE 'Ganesha' Jakarta, Indonesia  
 Devie Iriani, Lecturer at STIAM I Social and Management Science Institute, Jakarta, Indonesia

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## November 3, 2021 (Wednesday) - Session: 11:00 pm

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**11:00 pm, WEDNESDAY****Undergraduate Student Paper Competition****Room 5 Virtual**

Session Chair: Dr. Md Mizanur Rahman, University Technology Malaysia

**ID 332 Capturing Interpersonal Relationship between Parents with Lgbt Children through Call Me By Your Name Movie**

Cindy Yolanda Kharismatika, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia  
 Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia

**ID 263 Strategic Information Systems Planning for the Improvement of RS Top Pizza's Business Process**

Dion Karl V. Mandario, Jhustine C. Landingin, Grace Lorraine D. Intal, School of Information Technology Mapua University, Makati, NCR, Philippines

**ID 275 Determining Strategies for The Perfect Shade Mobile Application Using SWOT Analysis and Six Thinking Hats**

Bryelle Timothy C. Nisperos, Joshua Yñigo N. Pascual, Jerome Patrick S. Ramos, Grace Lorraine D. Intal, School of Information Technology, Mapua University, Makati, Philippines

**ID 429 Academic Performance, Fatigue, and Stress in Online Learning among College Students: A Multivariate Analysis**

John Jeric R. Almonte, Emil R. Badillo, Kevin Brian S. Candelaria, Ian Kent D. Tadler, John Timothy P. Villacorte, Romalyn Galingan  
 Department of Industrial Engineering, College of Engineering and Architecture Technological Institute of the Philippines – Quezon City Cubao, Quezon City, Philippines

**ID 122 A Review on Decision-Making towards a Resilient Supply Chain in FMCG Companies during an Epidemic Outbreak**

Hasini Balasuriya, Department of Industrial Management, University of Kelaniya, Sri Lanka Kadawatha, Western, Sri Lanka

**ID 125 Business process reengineering in public sector organizations: Systematic literature review of critical success factors**

A.A.T.M. Amarasinghe, Ruwan Wickramarachchi, Department of Industrial Management, University of Kelaniya, Kelaniya, Sri Lanka

**ID 150 Designing a Data Governance Model to Implement GDPR in Sri Lankan Enterprises.**

P.A.Indhumini Ranathunga, and Ruwan Wickramarachchi, Dept. of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka

**ID 338 How the Use of Unmanned Aerial Vehicles to Detect Lost Energy in Buildings Leads to Industrial Sustainability - A Systematic Review**

Sarah Ali A Alshahrani, Industrial Engineering Department, King Khalid University, Abha, Saudi Arabia

**ID 197 An Overview of the Factors Affecting the E-commerce Readiness of SMEs in Sri Lanka**

Hansika Kelambi Arachchige, Department of Industrial Management, University of Kelaniya, Sri Lanka  
 Ruwan Wickramarachchi, Department of Industrial Management, University of Kelaniya, Sri Lanka

**ID 118 Organizational Factors Affecting the Effectiveness of Information Security Management Systems in IT Sector Organizations in Sri Lanka : A Literature Review**

K.M.N. De Abrew and Dr. Ruwan Wickramarachchi, Department of Industrial Management, University of Kelaniya, Sri Lanka

**ID 334 Direct Water Cooling of Stator Yoke of SRM with High Frequency and Current Density**



Bui Minh Dinh, School of Electrical Engineering, Hanoi University of Science and Technology

**ID 443 Application of Decision Theory on Strategy of Supermarket in Promoting Health Safety and Developing Sustainability amidst Pandemic**

Angelo Luis S. Doctora, William Davin D. Perez, Franco Neil A. Sanchez, Abigail B. Vasquez, Rene D. Estember, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

**ID 444 Markov Chain Analysis of Student Learning Progression in a Quarter Academic System**

Jhon Lawrence G. Quimio, Anthony A. Sanchez, Kianna Denise C. Villapando, Rene D. Estember, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

**ID 456 A Queuing Theory Approach to Improve Service Quality of Banking Systems: A Case Study of a Bank in Laguna, Philippines**

Frankern Luis S. Malabuyoc, Ma. Daniella M. Sobrevilla, Madeline Anne Patrice C. Sy, Rene D. Estember, School of Industrial Engineering and Engineering Management, Mapúa University, Intramuros, Manila, Philippines

**ID 462 The Applications of Game Theory in Processing the Orders of Shopee and Lazada**

Deceree Anne A. Haboy, Daniel John B. Sacramento, Ervin Josh P. Santos, Christine Angelie Y. Taw, and Rene D. Estember, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

**ID 355 Readiness Factors for SMEs in e-Business to Adapt Digital Marketing in Sri Lanka: A Systematic Literature Review**

Kaveesha Madurapperuma, Department of Industrial Management, University of Kelaniya, Sri Lanka  
Janaka Wijayanayake, Department of Industrial Management, University of Kelaniya, Sri Lanka

**ID 400 Critical Success factors of adopting Social Media for Internal Communication in Private Sector Organizations in Sri Lanka**

Udeshinie Wijesinghe, Janaka Wijayanayake, Department of Industrial Management, University of Kelaniya, Sri Lanka

**ID 408 Analysing the Potential of Technology in Sri Lanka to Adopt E- voting : A Systematic Literature Review**

Saraniya Selvanesan and Janaka Wijayanayake, Department of Industrial Management, University of Kelaniya, Sri Lanka

**ID 423 Influence of the Rotor Slot Number on Core Losses of the Induction Motor**

Bui Minh Dinh, School of Electrical Engineering and Electronics, Hanoi University of Science and Technology

## November 4, 2021 (Thursday) - Session: 6:00 – 8:00 am

### 6:00 – 8:00 am, THURSDAY

### Environmental Systems Engineering

### Room 5 Virtual

Session Chair: Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapua University, Manila, Philippines

**ID 124 Design of Feasibility Study Parameters for Selection of B3 Waste Treatment Location in Bangkalan District**

Rina Sri Wulandari, Waluyo Prasetyo, Luqman Hakim, Taqwanur, Industrial Engineering Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo, Indonesia  
Medya Ayunda Fitri, Chemical Engineering Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo, Indonesia

**ID 247 Qualitative Assessment of Bioaerosol and Improvement of Indoor Air Quality of Grocery Store in Tuguegarao City**

Janus Clifford R. Calagui, Juan Fernando C. Consuegra, Lemuel A. Plaza, John Vergel S. Quising  
School of Mechanical and Manufacturing Engineering, Mapua University, Muralla St., Intramuros, Manila, Philippines 1002  
Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines

**ID 249 Assessment of Indoor Air Quality of Modernized Jeepney in Manila**

Arch Joseph V. Ayala, Bon Kenoh R. Fernando, John Luis G. Joven, John Jerry B. Soreta, Engr. Ricky D. Umali, School of Mechanical and Manufacturing Engineering, Mapua University, Muralla St., Intramuros, Manila, Philippines  
Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines

**ID 381 A Comparative Life Cycle Assessment Study of Conventional and Best Available Techniques Incorporated Cement Production Processes using midpoint approach.**

Busola Dorcas Olagunju, Oludolapo Akanni Olanrewaju, Department of Industrial Engineering, Faculty of Engineering and the Built Environment, Durban University of Technology, Durban, South Africa  
Rubén Irusta-Mata, Institute of Sustainable Processes, University of Valladolid, Dr. Mergelina s/n, 47011 Valladolid, Spain  
Department of Chemical Engineering and Environmental Technology, School of Industrial Engineering, Paseo del Cauce, 59, University of Valladolid, 47011 Valladolid, Spain.

**ID 017 Application of Fuzzy Logic for Evaluation of the Level of Social Acceptance of Traffic Noise Pollution Reduction Strategies in Western New York**

Daxing Zhao, Zichuan Liu, Anthony Runk, Johnson Adebayo Fadeyi, Dept. of Industrial & Systems Engineering, University at Buffalo, NY, USA

**ID 557 Econometric Panel Analysis of Transportation Sub Sector companies: Firm-specific factors Approach**

Firly Irahmani, Ulfyah Mazidatun Ni'mah, Riyan S. Putra, Department of Management, Universitas Nahdlatul Ulama, Surabaya, Indonesia

**ID 587 Identification Dominant Factors of Infrastructure Development in Tourist Natural Reserves**

Darmawan Pontan, Ryan Faza Prasetyo, Reky Prayogo, Wishnu Arindra Pranoto, Civil Engineering Dept., Universitas Trisakti, Jakarta, Indonesia

**ID 612 East Java OPOP: Increasing the Growth of SMEs in Islamic Boarding Schools during the COVID-19 Pandemic**

Muhafidhah Novie, Ayu Lucy Larassaty, Laily Muzdalifah and Sharifah Ageng Pratiwi, Management Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

Elsa Rosyidah, Institute for Research and Community Services, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

**6:00 – 8:00 am, THURSDAY****Construction Management****Room 6 Virtual**

Session Chair: Mohammad AL Ayoub, Department of Civil Engineering, University of Sharjah, Sharjah, UAE

**ID 033 Designing System Assessment of Supply Chain Management Performance in Bridge Project using SCOR**

Naniek Utami Handayani, Industrial Engineering Department, Diponegoro University, Prof. Soedarto, S.H., Semarang, 50275, Indonesia  
 Anita Mustikasari, Management Department, Yogyakarta State University, Colombo No. 1 Yogyakarta, 55281, Indonesia  
 Mochammad Agung Wibowo, Civil Engineering Department, Diponegoro University, Prof. Soedarto, S.H., Semarang, 50275, Indonesia  
 Chemink Sugondo Simanungkalit, Industrial Engineering Department, Diponegoro University, Prof. Soedarto, S.H., Semarang, 50275, Indonesia

**ID 034 AHP Method for Supply Chain Management Performance Measurement in Construction (Study Case: Bridge Project)**

Anita Mustikasari, Management Department, Yogyakarta State University, Colombo No. 1 Yogyakarta, 55281, Indonesia  
 Naniek Utami Handayani, Industrial Engineering Department, Diponegoro University, Prof. Soedarto, S.H., Semarang, 50275, Indonesia  
 Mochammad Agung Wibowo Civil Engineering Department, Diponegoro University, Prof. Soedarto, S.H., Semarang, 50275, Indonesia  
 Chemink Sugondo Simanungkalit, Industrial Engineering Department, Diponegoro University, Prof. Soedarto, S.H., Semarang, 50275, Indonesia

**ID 185 Impact of Material and Labour Cost Overruns on Contractors' Budgeted Cost: The Case of Building Construction Projects in Sri Lanka**

R.D.W.W.Jayathilaka, K.G.A.S.Waidyasekara and D.C.Sirimewan, Department of Building Economics, University of Moratuwa, Sri Lanka

**ID 337 A QFD-AHP Method for Bridges Structural System Selection During the Conceptual Design Phase**

Mohammad AL Ayoub, Department of Civil Engineering, University of Sharjah, Sharjah, UAE  
 Saleh Abu Dabous, Department of Civil Engineering, University of Sharjah, Sharjah, UAE  
 Mohammed Alsharqawi, Township of South Stormont, Long Sault, Ontario, Canada

**ID 588 Identification of Dominant Factors Affecting the Successful Development of Highway Construction Projects**

Darmawan Pontan, Ryan Faza Prasetyo, Tomi Adenugroho, Adhirisw Nur Idatama, Civil Engineering Department, Universitas Trisakti, Jakarta, 11440, Indonesia

**ID 598 The Effect of SAP S/4 HANA Implementation on the Supply Chain Management Process to Company Benefits in Construction Service Companies**

Fadilla Dwi Pratiwi and Jane Sekarsari Tamtana1, 1Civil Engineering Master Program, Faculty of Civil Engineering and Planning, Universitas Trisakti, Jl. Kyai Tapa No.1, Jakarta, Indonesia

**ID 595 Optimization of Service Quality: Quality Function Deployment Approach**

Sukaris, M. Fakhruddin Syah, Aries Kurniawan, and Nadhirotul Laily, Universitas Muhammadiyah Gresik, Gresik Regency, East Java, Indonesia  
 Joko Suyono, Narotama University, Surabaya, Indonesia

**ID 596 Improving Company Competitiveness Through Human Resources Development Strategies in Freight Forwarding Companies**

Indro Kirono, Sukaris, Abi Hanif Dzulquarnain, Abdurrahman Faris Indriya Himawan, Management Department, Faculty of Economics and Business Universitas Muhammadiyah Gresik, Gresik Regency, East Java, Indonesia  
 Joko Suyono, Department of Management and Business, Narotama University, Surabaya, Indonesia 60117Indonesia

**6:00 – 8:00 am, THURSDAY****Case Studies****Room 7 Virtual**

Session Chair: Prasetya Cahya Saputra, School of Information System, Bina Nusantara University, Jakarta, Indonesia

**ID 193 A Risk Level Assessment of Food Delivery Riders for COVID-19**

Lorenzo T. Caday, Krisanta Ana E. Draculan, Kianna Denise C. Villapando, Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapua University, Muralla St., Intramuros, Manila, 1002

**ID 315 Identifying the Impact of Transmigration Policy on Local Community: A Case Study of Sigulai Village, Simeulue Regency, Indonesia**

Nellis Mardhiah, Agatha Debby Reiza Marcela, Faculty of Social and Political Sciences, Universitas Teuku Umar, Ujong Tanoh Darat, Meureubo, West Aceh, Aceh 23681, Indonesia  
 Jumadil Saputra and Zikri Muhammad, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 190 User Satisfaction Analysis of Mobile E-Property Management Applications Using End User Computing Satisfaction Method (Case Study Apartments in Jakarta)**

Prasetya Cahya Saputra, School of Information System, Bina Nusantara University, Jakarta, Indonesia

**ID 346 Communication Strategies of Private University Students in Malang in Adapting to Online Lectures During Pandemic**

Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia  
 Windaningsih, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta, Indonesia  
 Cindy Jane Suharjo, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta, Indonesia

**ID 356 Pinning-Up Of Household Financial Behavior To Support Financial System Stability In Indonesia (2015-2019)**

Nur Azmi Karim, Entrepreneurship Departement, Bussiness School Undergraduate Program Bina Nusantara University Bandung Campus Bandung, Indonesia

**ID 373 Generation Z's Perception on the Concept of Sexual Harassment through Tiktok Videos**

Hikmashanty Suci Larasati, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia  
 Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia

**ID 376 Optimization of Oil Well Production Using Binary Programming Method: Case Study Offshore Platform**

Deni Ahmad Taufik, Master of Industrial Engineering Student, Universitas Mercu Buana, Kembangan, Jakarta, Indonesia  
 Choesnul Jaqin, Master of Industrial Engineering Department, Universitas Mercu Buana, Kembangan, Jakarta, Indonesia  
 Humiras Hardi Purba, Master of Industrial Engineering Department, Universitas Mercu Buana, Kembangan, Jakarta, Indonesia

**ID 586 Analysis of Relative Lateral Drift between Adjacent Floors of the High-Rise Building Structure without and with Seismic Base Isolations**

Fakhry Ajie Hidayat, Graduated from the Civil Engineering Master Program, Trisakti University, Indonesia  
 Agus Hadi Santosa Wargadipura, Senior Lecturer in the Civil Engineering Master Program, Trisakti University, Indonesia

**6:00 – 8:00 am, THURSDAY**

**Operations Research**

**Room 8 Virtual**

Session Chair: Subas, Sekolah Tinggi Agama Islam Al Fithrah, Surabaya, Indonesia

**ID 136 Factors Affecting the Fresh Flower Cold Chain Logistics**

Jirapat Wanitwattanakosol and Yuqin Zhou, College of Arts, Media and Technology, Chiang Mai University, Chiang Mai, 50200, Thailand

**ID 068 Four Decades of the Consumer Culture Publication: A Bibliometric Overview**

Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia  
 Bruce Dame Laoera, School of Liberal Arts, Mae Fah Luang University, Thailand  
 Windaningsih, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta, Indonesia  
 Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

**ID 092 Research Mapping of Content Creator: Lesson from Bibliometric Analysis**

Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia  
 Anom Surya Putra, PENABULU Research Institute, Tangerang Selatan, Banten, 15318, Indonesia  
 Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

**ID 109 Digital Media in Indonesia: A Retrospective of The Study Journey**

Yanuarita Kusuma Permata Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia  
 Nur Kholis, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia  
 Windaningsih, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta, Indonesia  
 Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

**ID 425 Modeling and Algorithm Design for Driver Assignment Problems Considering Drivers States and Capacity**

Rizki Basuki, Rully Cahyono, Andi Cakravastia, Department of Industrial Engineering, Institut Teknologi Bandung, Bandung 4013, INDONESIA

**ID 244 Optimization of Oil Well Production Using Binary Programming Method: Case Study Offshore Platform**

Deni Ahmad Taufik, Master of Industrial Engineering Student, Universitas Mercu Buana, Kembangan, Jakarta, Indonesia  
 Choesnul Jaqin, Master of Industrial Engineering Department, Universitas Mercu Buana, Kembangan, Jakarta, Indonesia  
 Humiras Hardi Purba, Master of Industrial Engineering Department, Universitas Mercu Buana, Kembangan, Jakarta, Indonesia

**ID 307 Coordination and Non Coordination Lease Contract Model with Availability Target**

H. Husniah, Department of Industrial Engineering, Langlangbuana University, Bandung, Indonesia  
 Bermawi.P. Iskandar and A. Cakravastia, Department of Industrial Engineering, Bandung Institute of Technology, Bandung, Indonesia

**ID 571 Work Loyalty and Employee Performance: The Mediating Role of Organizational Commitment**

Nasyik Ifadah, Arasy Alimudin, Tri Utoyo, Joko Suyono, Narotama University, Surabaya, Indonesia  
 Subas, Sekolah Tinggi Agama Islam Al Fithrah, Surabaya, Indonesia

**6:00 – 8:00 am, THURSDAY**

**Inventory Management**

**Room 9 Virtual**

Session Chair: Nguyen Thi Mong Ngan, Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand

**ID 476 Inventory Modeling for Automotive Spare Parts with Probabilistic Demand by Considering an Integrated Cost and Filling Rate**

Wirawan Agung Nugroho, Mohammad Mi'radj Isnaini, Abdul Hakim Halim, Industrial Engineering Department, Institut Teknologi Bandung, Bandung 40132, Indonesia

**ID 101 Development and Application of an e-Kanban System in the Automotive Industry**

Bárbara Romeira, DEGEIT, University of Aveiro, Campus Universitário de Santiago 3810-193, Aveiro, Portugal  
 Francisco Cunha, FSC Consulting, Portugal  
 Ana Moura, GOVCOPP / DEGEIT, University of Aveiro, Campus Universitário de Santiago 3810-193, Aveiro, Portugal

**ID 067 Inventory rationing in a (s, S) system with compound Poisson demand**

Sugoutam Ghosh, Singapore University of Social Sciences, Singapore

**ID 416 Supply chain inventory optimization: An alternative approach**



Nguyen Thi Mong Ngan, School of Manufacturing Systems and Mechanical Engineering, Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand  
Jirachai Buddhakulsomsiri, School of Manufacturing Systems and Mechanical Engineering, Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand  
Pham Duc Tai, School of Manufacturing Systems and Mechanical Engineering, Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand

**ID 086 Ambidexterity: Strategies to Deal with the Impact of the COVID-19 Pandemic on SMEs in Indonesian's Creative Industry**  
Maria Pampa Kumalaningrum, Management Doctoral Program-Faculty of Economic and Business, Universitas Gadjah Mada (UGM), Yogyakarta, Indonesia, Department of Management-Faculty of Economic and Business, STIE Yayasan Keluarga Pahlawan Negara (STIE YKPN), Yogyakarta, Indonesia  
Wakhid Slamet Ciptono, Nurul Indarti, Boyke Rudy Purnomo, Department of Management-Faculty of Economic and Business, Universitas Gadjah Mada (UGM), Yogyakarta, Indonesia

**ID 196 Order Picking Improvement through Storage Assignment Optimization and Human Error Identification: A Case Study of Automobile Seat Manufacturer**  
Niniet Indah Arvitrida, Muhammad Andhika Adiwidya, Department of Industrial and Systems Engineering, Institut Teknologi Sepuluh Nopember Surabaya 60111, Indonesia

**ID 266 An Integrated Framework of Balance Scorecard-PESTLE-Smart and Green Port for the Reduction of Dwelling Time**  
Yugowati Praharsi, Fitri Hardiyanti, Devina Puspitasari, Ristanti Akseptori, and Aditya Maharani, Business Management Department Shipbuilding Institute of Polytechnic Surabaya, Surabaya, Indonesia

**ID 572 Transformational Leadership and Turnover Intention: The Mediating Role of Job Satisfaction**  
Zetayu Vinata Meriel, Joko Suyono, Erwin Pramastya Sabatini, Ivan Wijaya, Narotama University, Surabaya, Indonesia  
Damarsari Ratnasahara Elisabeth, STIE Mahardhika Surabaya, Surabaya, Indonesia

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## November 4, 2021 (Thursday) - Session: 9:40 am – 1:00 pm - Ballroom

### Keynote Speakers – Day 2

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8:15 - 8:30 am Welcome Address:  
Autonomous University of Nuevo Leon and  
The Automotive Cluster of Nuevo León (CLAUT)

8:30 - 9:15 am Keynote VI:

**Alberto de Icaza**  
Head of External Affairs  
ZF Group Mexico

9:15 - 10:00 am Keynote VII:

**Eric Ayanegui, CPMM, CRL**  
Director Operations Engineering  
Cintas Corporation, Houston, Texas, USA – Ballroom

10:00 – 10:15 am Break

10:15 - 11:00 am Keynote VIII:

**David Pistrui, Ph.D.**  
Professor of Engineering, College of Engineering & Science  
University of Detroit Mercy, Detroit, Michigan, USA – Ballroom

11:00 - 11:45 am Keynote IV:

**Prof. Jose Arturo Garza-Reyes**  
Professor of Operations Management

Head of the Centre for Supply Chain Improvement  
College of Business, Law and Social Sciences  
University of Derby, UK

11:45 am - 12:30 pm Keynote X:

**Franco Omar Ramos Langer**  
Channel Technical and Business Enablement Manager  
Siemens Digital Industries Software  
Digital Software Division  
Querétaro, Mexico

12:30 - 1:00 pm Lunch Break

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## November 4, 2021 (Thursday) - Session: 1:00 – 2:45 pm

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**1:00 – 2:45 pm, THURSDAY**

**Plenary Session - III**

**Ballroom 1a**

Session Chair: Diana Hernández, Physics and Mathematics Department, Universidad de Monterrey

1:00 - 1:30 pm, Thursday, November 4 - Plenary VII

Dr. Dimitru Nedelcu  
Professor, Technical University of Iasi  
Romania

The Behavior of Biodegradable Materials in Injection Molding and 3D Printing Processes

1:40 - 2:10 pm, Thursday, November 4 - Plenary VIII

Dr. Jamison Kovach  
PMI Houston Endowed Professor in Project Management  
University of Houston  
Texas, USA

Data: Guilty Until Proven Innocent

2:15 - 2:45 pm, Thursday, November 4 - Plenary IX

Edgardo J. Escalante-Vázquez, PhD, MBB  
Professor Emeritus in Industrial Engineering  
Tecnológico de Monterrey, Mexico

RSM Using Paper Helicopters

**1:00 – 2:45 pm, THURSDAY**

**Panel 3**

**Ballroom 1b**

### Panel: Entrepreneurship Education

Partner: UANL

Panel chair/moderator: Aida Miriam Cisneros Gómez

#### Penalists

**Alfonso López Lira**  
Coordinador de la Maestría de Innovación y Emprendimiento de FACPYA

**Juan Ignacio González**  
Profesor Departamento ICyG, Líder de Academia de Emprendimiento de IGE

**Luis Portales Dérbez**  
Profesor Departamento de Emprendimiento. Experto en Emprendimiento Social

**Aldahir Caballero Campbell**  
Director of the incubation and entrepreneurship

**1:00 – 2:45 pm, THURSDAY****Environmental Systems Engineering****Breakout Room 1 - Onsite**

Session Chair: Dr. Santos Saénz. Civil and Management Engineering. Universidad de Monterrey

**ID 219 Calcium And Sodium Alginate Concentrations for Reverse Spherification**

Gerardo Espinosa Garza, UDEM, Monterrey, Nuevo Leon, Mexico

**ID 220 Process to Delay Hypalon Wastage**

Gerardo Espinosa Garza, UDEM, Monterrey, Nuevo Leon, Mexico

**ID 221 Wine Production with Frozen Grapes**

Gerardo Espinosa Garza, UDEM, Monterrey, Nuevo Leon, Mexico

**ID 365 Life cycle assessment in the wine industry – a Bibliometric analysis**

Adrián Salvador Morales García, Jorge Luis García Alcaraz and Yashar Aryanfar, Department of Electric Engineering and Computers Sciences Autonomous University of Ciudad Juárez, Ciudad Juárez 32310, Mexico

José Roberto Díaz Reza, Department of Industrial Engineering, Tecnológico Nacional de México/I.T. Ciudad Juárez, Ciudad Juárez 32500, Mexico

Ari Happonen, LUT School of Engineering Science, LUT University, Lappeenranta 53850, Finland

Julio Blanco Fernández, Department of Mechanical Engineering, University of La Rioja, Logroño, 26006, Spain

**ID 420 Vertical Take-off and Landing Platform for Cartography and Local Governance Consulting**

D.A. Perez-DeLaMora, Joaquin Aguerreberre, J. Emilio Quiroz-Ibarra, E.G. Hernández-Martínez, José Manuel Cámara Roldán and Diego Enrique Bastien Leon, Instituto de Investigación Aplicada y Tecnología, Universidad Iberoamericana Ciudad de México, Mexico City, Mexico

J.M. Nuñez, Centro Transdisciplinario Universitario de Sustentabilidad, Universidad Iberoamericana Ciudad de México, Mexico City, Mexico

J. Á. González-Ordiano, Departamento de Estudios en Ingeniería para la Innovación, Universidad Iberoamericana Ciudad de México, Mexico City, Mexico

G. Fernandez-Anaya Departamento de Física y Matemáticas, Universidad Iberoamericana Ciudad de México, Mexico City, Mexico

**ID 058 Responsible consumption as a driver for remanufactured products**

Karina Cecilia Arredondo-Soto, Facultad de Ciencias Químicas e Ingeniería, Universidad Autónoma de Baja California, Calzada Universidad #14418, Parque Industrial Internacional, Tijuana 22390, Baja California, México.

Arturo Realyvasquez-Vargas, Department of Industrial Engineering, Tecnológico Nacional de México/Instituto Tecnológico de Tijuana, Calzada del Tecnológico S/N, Tijuana 22414, Baja California, Mexico.

Jorge Luis Garcia-Alcaraz, Department of Industrial and Manufacturing Engineering, Autonomous University of Ciudad Juárez, Ave. del Charro 450 Norte. Col. Partido Romero, Ciudad Juárez 32310, Chihuahua, México.

Jesús Everardo Olguín-Tiznado, 4Departme Faculty of Engineering, Architecture, and Design. Autonomous University of Baja California. Carr. Transpeninsular 3917, U.A.B.C., 22860 Ensenada, Baja California, México.

**ID 368 Industrial Symbiosis for Responsible Consumption in the Coffee Sector: Literature Review**

Arturo Gutiérrez Maya, Gabriela Guadalupe Escobedo Guerrero, ESCA Santo Tomás, Instituto Politécnico Nacional, México City, México

Lila Margarita Bada-Carbajal, Instituto Tecnológico Superior de Álamo Temapache, Tecnológico Nacional de México, Veracruz, México

Antonio Uribe Méndez, ESCA Santo Tomás, Instituto Politécnico Nacional, México City, México

**ID 001 Location of a Temporary Site to Earthquake Waste Separation. Case study: Mexico City**

Adriana Guadalupe Aguilar Montoya, Ángel Leonardo Bañuelos Saucedo, and Flor Hernández Padilla, Mechanical and Industrial Engineering Division, School of Engineering, National Autonomous University of Mexico, Mexico City, Mexico

**1:00 – 2:45 pm, THURSDAY****Manufacturing****Breakout Room 2 - Onsite**

Session Chair: Dr. Diana Gámez. Physics and Mathematics Department. Universidad de Monterrey

**ID 25 Simulation of Texture Geometries to Optimize Tribological Properties.**

Adrián Rodríguez, Luisa Martínez, and Luis Miranda, School of Engineering and Technologies, Universidad de Monterrey, San Pedro Garza García, N.L. 66238, México

Laura Peña-Parás, Santiago Cruz and Demófilo Maldonado, Department of Mechanical and Electronic Engineering, Universidad de Monterrey, San Pedro Garza García, N.L. 66238, México

Martha Rodríguez-Villalobos, Department of Physics and Mathematics, Universidad de Monterrey, San Pedro Garza García, N.L. 66238, México

**ID 148 Total Quality Management, Just In Time and Its Impact on Supply Chain Management in Manufacturing Companies**

Diana Maricela Vasquez Treviño, Mónica Blanco Jiménez, Jesús Fabián López Pérez, Sergio Armando Guerra Moya

Facultad de Contaduría Pública y Administración, Universidad Autónoma de Nuevo León, Cd. Universitaria, N.L. México

**ID 473 Relationship Between Lean Manufacturing and Sustainability – A Bibliometric Analysis**

Luis Javier Márquez Figueroa, Jorge Luis García Alcaraz, Instituto de Ingeniería y Tecnología, Universidad Autónoma de Ciudad Juárez

Jesús Alfonso Gil López, Departamento de Economía y Empresa, Universidad de La Rioja

**ID 090 Enhancement of Corrosion Resistance of Hot-Dip Galvanized Carbon Steel by Low Amount of Ni Addition**

Rafael Gonzalez-Parra, Arturo Barba-Pingarrón, Raúl Valdez- Navarro, Alba Covelo-Villar, Miguel A. Hernández-Gallegos

1.- Centro de Ingeniería de Superficies y Acabados (CENISA). Departamento de Ingeniería de Diseño y Manufactura. División de Ingeniería

Mecánica e Industrial. Facultad de Ingeniería., UNAM. 2o Nivel. Edificio "T" (Bernardo Quintana), Circuito Exterior, Ciudad Universitaria, Coyoacan, 04510, Ciudad de México

Javier Cervantes-Cabello, 2.- Centro de Ingeniería Avanzada, Departamento de Ingeniería de Diseño y Manufactura, División de Ingeniería

Mecánica e Industrial, Edificio X. 2o Piso, Circuito Exterior, Ciudad Universitaria. Coyoacan, 04510, Ciudad de México.

**ID 291 Enhancement of Corrosion Resistance of Hot-Dip Galvanized Carbon Steel by Low Amount of Ni Addition**

Rafael Gonzalez-Parra, Arturo Barba-Pingarrón, Raúl Valdez- Navarro, Alba Covelo-Villar, Miguel A. Hernández-Gallegos,



1.- Centro de Ingeniería de Superficies y Acabados (CENISA), Departamento de Ingeniería de Diseño y Manufactura, División de Ingeniería Mecánica e Industrial, Facultad de Ingeniería, UNAM. 2o Nivel, Edificio "T" (Bernardo Quintana), Circuito Exterior, Ciudad Universitaria, Coyoacan, 04510, Ciudad de México.

Javier Cervantes-Cabello, 2.- Centro de Ingeniería Avanzada, Departamento de Ingeniería de Diseño y Manufactura, División de Ingeniería Mecánica e Industrial, Edificio X. 2o Piso, Circuito Exterior, Ciudad Universitaria, Coyoacan, 04510, Ciudad de México

#### **ID 224 Simulation and Analysis of the Actuation System in a Camless Piston Engine**

Andrés M. Sada-Regalado, David F. Novella-Rodriguez and Juan C. Tudon Martínez

### **1:00 – 2:45 pm, THURSDAY**

### **Automation and Modeling**

### **Breakout Room 3 - Onsite**

Session Chair: Andrés Hernández, Mechanical and Electrical Engineering, Universidad de Monterrey

#### **ID 382 Determination of Heat Transfer Coefficient In Heat Treatment Processes Using Computational Fluid Dynamics Simulation**

Juan Barbosa and Arturo Aranda, Manufacturing Process Simulation Department, DRIVEN / CLAUT Innovation Center, Monterrey, NL 66628, Mexico

#### **ID 032 Comparison of energy, environment, time and cost of different modes of transport in an intermediate city**

Gustavo Alvarez-Coello and Diego Rosero-López, ERGON – Automotive Engineering Research and Development Center, Universidad del Azuay, Cuenca, Azuay 010207, Ecuador

#### **ID 061 To Improve The Coefficient Of Performance Using Engineering Equation Solver: Parametric Case Study Of Vapor Absorption System At Thermal Power Station, Jamshoro**

Uhamir Patrick, Hussain Bux Marri, Abdul Shakoor Shaikh, Lecturer, Professor, and Assistant Professor, Department of Mechanical Engineering Technology, The Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mirs, Sindh, Pakistan  
Madad Ali Shah, Mir Sajjad Hussain Talpur, Engr Sameeullah Pathan, Vice Chancellor, Director (Planning and Development), and Transport Officer, The Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mirs, Sindh, Pakistan

#### **ID 194 Time duration of a driving cycle and its representativeness**

Michael Giraldo, Mechanical engineering department, Universidad EAFIT, Medellin, Colombia

Luis F. Quirama and Juan E. Tibaquirá, Mechanical engineering department, Universidad Tecnológica de Pereira, Pereira, Colombia

José I. Huertas, Mechanical engineering department, Tecnológico de Monterrey, Monterrey, México

### **1:00 – 2:45 pm, THURSDAY**

### **Industry Solutions I**

### **Room 5 Virtual**

Session Chair: Humberto de la Garza, Computer Science and Industria Engineering. Universidad de Monterrey

1:00 – 1:20 (Thursday, November 4)

Pawan Bhandari

Principal Health Systems Engineer, Strategy Department  
Mayo Clinic, Rochester, Minnesota, USA

1:20 – 1:40 (Thursday, November 4)

Dr. James McKirahan

Associate Professor, College of Technology  
Indiana State University, Terre Haute, Indiana, USA

1:40 – 2:00 (Thursday, November 4)

Dr. Alister McLeod

Associate Professor, Applied Engineering and Technology Management  
College of Technology  
Indiana State University, Terre Haute, Indiana, USA

2:00 – 2:20 (Thursday, November 4)

Dr. Christopher Kluse

Associate Professor, College of Technology Architecture and Applied Engineering  
Bowling Green State University, Bowling Green, Ohio, USA

2:20 – 2:40 (Thursday, November 4)

Dr Boitumelo Ramatsetse

Lecturer: Engineering Graphics and Design (EGD), Educational Information and Engineering Technology (EDIET)  
Wits School of Education, University of the Witwatersrand, Johannesburg, South Africa

Modelling complex industrial products and systems through the application of reconfigurable manufacturing system thinking

2:20 – 2:40 (Thursday, November 4)

Alan Beltrán

Head of Plant Industrial Engineering  
VNI CCN O AGC IE

Plant Aguascalientes  
Vehicle Networking and Information (VNI)  
Continental Automotive  
Aguascalientes, Ags., Mexico

**1:00 – 2:45 pm, THURSDAY****Quality and Reliability****Room 6 Virtual**

Session Chair: Humberto Martínez, Physics and Mathematics Department, Universidad de Monterrey

**ID 391 Economic Statistical Design of np Control Chart for Monitoring Attribute**

Batool Alamasi, Department of Industrial Engineering and Engineering Management University of Sharjah, Sharjah, UAE  
Salah Haridy, Department of Industrial Engineering and Engineering Management University of Sharjah, Sharjah, UAE  
Mohammad Shamsuzzaman, Department of Industrial Engineering and Engineering Management University of Sharjah, Sharjah, UAE  
Hamdi Bashir, Department of Industrial Engineering and Engineering Management University of Sharjah, Sharjah, UAE

**ID 350 The Effects of Poor Internal Quality on Customer Satisfaction**

Alexandr M. Sokolov, Ph.D., Steven Picklesimon, M.Sc., Duaa Nawafleh, M.Sc. and Niamat Ullah Ibne Hossain, Ph.D.  
Engineering Management Program, Arkansas State University, State University, AR 72467, USA

**ID 207 Smart Warning system for the Rotating parts based on Cloud Computing**

Amr Mohamed Ali, Department of Mechanical Design Engineering Faculty of Engineering, Helwan University, Cairo, Egypt  
Soumaya Yacout, Department of Mathematic and Industrial Engineering, École Polytechnique, Montréal, Québec, Canada  
El-Adl Eladl Rabeih, Department of Mechanical Design Engineering Faculty of Engineering, Helwan University, Cairo, Egypt  
Yasser Shaban, Department of Mechanical Design Engineering Faculty of Engineering, Helwan University, Cairo, Egypt

**ID 228 Non-homogeneous Poisson Process modelling to determine the reliability and failure cost of locomotives during the warranty phase: The study of the South African Railway**

B.B.S. Makhanya, H. Nel & J. H.C Pretorius, Faculty of Engineering and Built Environment, University of Johannesburg, Gauteng, South Africa

**ID 358 Leveraging the Application of Forecasting Methods to Analyze the Scrap Data of a Tire Industry**

Larissa Guimaraes T. Santanna, Jessica Lee, Drew Wright, Niamat Ullah Ibne Hossain, Ph.D.  
Mississippi State University, Mississippi State, MS 39762, USA

**ID 257 Development of integrated continuous improvement framework for competitiveness: mixed research of Ethiopian manufacturing industries**

Haftu Hailu, Hailekiros Sebhato, Kinfe Tsegay, Hailesselasie Mehari, Industrial Engineering Department, Ethiopian Institute of Technology-Mekelle (EIT-M), Mekelle University, Mekelle, Tigray, Ethiopia

**1:00 – 2:45 pm, THURSDAY****Smart Mobility and Smart Cities****Room 7 Virtual**

Session Chair: Mariela Cerrada Lozada, Professor, Universidad Politécnica Salesiana, Cuenca, Azuay, Ecuador

**ID 482 Classification of Driving Styles in the Metropolitan Area of Bucaramanga with On-board Monitoring (OBD-II) in Real Road Conditions**

Juan Danilo Molina Martínez, Brayan Ferney Acuña Olivar and Jessica Gissella Maradey Lázaro, Mechatronics Engineering Program, Universidad Autónoma de Bucaramanga, Bucaramanga, Santander, Colombia  
Jose Ignacio Huertas Cardozo, Mechanical Engineering Department, Tecnológico de Monterrey, Monterrey, Nuevo León, México

**ID 465 The Internet of Things start-up business model for smartization of urban transportation targeting Base of the Pyramid consumers**

Mohammad Jahanbakht, Department of Industrial, Manufacturing, and Systems Engineering, The University of Texas at Arlington, Arlington TX 76019, USA  
Mohammad Tondro, Management of Technology and Entrepreneurship Department, Allameh Tabataba'i University, Tehran, Iran  
Department of Industrial, Manufacturing, and Systems Engineering, The University of Texas at Arlington, Arlington TX 76019

**ID 245 Biodynamic Suspension Model in a Comfort-Oriented QoV Control System**

Abelardo Rodríguez-Moreno, E.A. Sánchez-Segoviano, L.A. Santa Cruz, and L.C. Félix-Herrán, School of Engineering and Sciences Tecnológico de Monterrey, Hermosillo, SON, 83000, Mexico  
Jorge de-J. Lozoya-Santos, School of Engineering and Sciences, Tecnológico de Monterrey, Monterrey, NL, 64849, Mexico  
Juan C. Tudón-Martínez, División de Ingeniería y Tecnología, Universidad de Monterrey, Monterrey, NL, 66238, México

**ID 651 Generating Artificial Driving Patterns by Using Generative Adversarial Networks**

Fannia Pacheco, Department of Mechanical and Electrical Engineering, University of Southern Denmark, SDU, Sønderborg, 6400, Denmark  
Mariela Cerrada, Research and Development Group on Industrial Technologies (GIDTEC), Universidad Politécnica Salesiana, Cuenca, Ecuador  
José Ignacio Huertas, Energy and Climate Change Research Group, School of Engineering and Science, Tecnológico de Monterrey, Monterrey, 64849, Mexico

**1:00 – 2:45 pm, THURSDAY****SCM and Finance****Room 8 Virtual**

Session Chair: Lino Garza, Physics and Mathematics Engineering Department, Universidad de Monterrey

**ID 084 Tendencias presentes y futuras de la logística de ciudad. Revisión de literatura (Recursos web)**

Javier Arias-Osorio, Escuela de Estudios Industriales y Empresariales, Universidad Industrial De Santander, Bucaramanga, Colombia,

**ID 348 Analysis of the Impact of Capital Structure in the Innovation of a Firm Using the Techniques of Financial Engineering**

Alexandr M. Sokolov, Ph.D., Anish Ghimire, M.B.A., Duaa Nawafleh M.Sc., and Niamat Ullah Ibne Hossain, Ph.D.  
Engineering Management Program, Arkansas State University, State University, AR 72467, USA  
Ashish Ghimire, Department of Finance, Insurance, Real Estate & Law, University of North Texas

**ID 167 Evaluation of the Electric Bus Power Train for Operating on Steep Slopes and Driving Cycles for Mountainous Routes**  
Diana Aragon, Daniel Salazar and Ricardo Moreno, Department of Mechanical Engineering, University of Antioquia, Medellin, Colombia

**ID 023 The role of hospital's digital services in improving the clinical regime of patients**  
Nassim BOUT, Fatima OUZAYD, Kawtar RETMI, National Higher School of Computer Science and System Analysis, ENSIAS, Mohammed V University (UM5R), Rabat, Morocco b INSTITUTE OF BIOLOGICAL SCIENCES, ISSB-P, Mohammed VI Polytechnic University (UM6P), 43 150 Benguerir, Morocco

**ID 584 The Winner's Curse as a Driver of Cost Overruns in Public Construction Projects**  
Yahel Giat, Department of Industrial Engineering, Jerusalem College of Technology, Israel  
Amichai Mitelman, Department of Civil Engineering, Ariel University, Israel

**1:00 – 2:45 pm, THURSDAY****Data Analytics****Room 9 Virtual**

Session Chair: John Ramiro Agudelo, Mechanical Engineering Professor, Universidad de Antioquia, Colombia

**ID 269 Implementation of Machine Learning and Deep Learning techniques in predictive maintenance**  
Rafiatun Ferdous Khan Lubaba, Department of Mechatronics and Industrial Engineering, Chittagong University of Engineering and Technology, Chittagong, Bangladesh

**ID 493 Predicting subgrain size and dislocation density in machining-induced surface microstructure of Nickel using supervised model-based learning**  
Rafiatun Ferdous Khan Lubaba, Department of Mechatronics and Industrial Engineering, Chittagong University of Engineering and Technology, Chittagong, Bangladesh

**ID 403 Detection of Mental illness using Machine learning**  
Manan Hingorani, M.Tech Student, Maharashtra Institute of Technology, Pune, India  
Nitin Pise, Faculty, MIT WPU, Maharashtra Institute of Technology, Pune, India

**ID 251 Applying Clustering Algorithm on Poverty Analysis in a Community in the Philippines**  
Michelle P. Repollo, School of Information Technology, Mapua University, Manila, Philippines  
Rex Aurelius C. Robielos, School of Industrial Engineering and Engineering Management, Mapua University, Manila, Philippines

**ID 304 Analyzing Different Factors Affecting Users' Adoption Of Dost Starbooks In Region 12 Using Technology Acceptance Model**  
Nabil A. Hadji Yassin, Department of Science and Technology Region 12, Koronadal City, South Cotabato, Philippines  
Joel C. De Goma, School of Information Technology, Mapua University, 333 Sen. Gil Puyat Avenue, Makati City, Philippines

**ID 411 Investigation of the Effectiveness of ERP System on Management Decision-Making in Higher Educational Institutions**  
George K. Aggrey, Department of Computer Science and Information Technology, University of Cape Coast, Ghana  
Amevi Acakpovi, Department of Electrical and Electronic Engineering, Accra Technical University (ATU), Ghana  
Emmanuel Peters, Department of Computer Science and Information Technology, Accra Institute of Technology (AIT), Ghana

**ID 412 ERP Implementation Challenges in Ghanaian Higher Education Institution**  
George K. Aggrey, Department of Computer Science and Information Technology, University of Cape Coast, Ghana  
Amevi Acakpovi, Department of Electrical and Electronic Engineering, Accra Technical University (ATU), Ghana  
Emmanuel Peters, Department of Computer Science and Information Technology, Accra Institute of Technology (AIT), Ghana

## November 4, 2021 (Thursday) - Session: 3:00 – 2:45 pm

**3:00 – 4:45 pm, THURSDAY****Plenary Session - IV****Ballroom 1a**

Session Chair: Fernando

3:00 - 3:30 pm, Thursday, November 4 - Plenary X

Francisco Santos  
Global Quality Director  
Metalsa

Metalsa Operating System and Industry 4.0

3:40 - 4:10 pm, Thursday, November 4 - Plenary XI

Dr. Simona Mihaita  
Data Science Institute, Future Mobility Lab  
University of Technology Sydney, Australia

The next generation of Digital Twins for smart cities

4:15 - 4:45 pm, Thursday, November 4 - Plenary XII

Dr. Francisco Cantú Ortiz  
Professor and Researcher  
Tecnológico de Monterrey

Artificial Intelligence and Digital Transformation 2030: Social and Ethical Considerations

**3:00 – 4:45 pm, THURSDAY**

**Panel 4**

**Ballroom 1b**

Session Chair:

## **Panel: Women in Industry and Academia**

Partner: ITESM

Panel chair / moderator: Adriana Vargas

### **Penalists**

**Grisel Trujillo (ITESM)**

**Karina Astorga**

**Alba (Professor, Uniandes)**

**Nicole Rodríguez (AT&T)**

**3:00 – 4:45 pm, THURSDAY**

**Operations Management**

**Breakout Room 1 - Onsite**

Session Chair: Dr. Consuelo Jimenez, Computer Science and Industria Engineering. Universidad de Monterrey

#### **ID 259 Understanding the Business Considerations for Future Model-building in the Financial Industry**

Henry I Schnetler, Marne De Vries, Wilna Bean, Department of Industrial and Systems Engineering, University of Pretoria, Pretoria, South Africa

#### **ID 267 Metro Red Line Purple Line Familiarization Training**

Michael J. Thomas, M.A., California State University, Los Angeles, Los Angeles, CA 90032, USA

#### **ID 290 Servant Leadership and Project Success in Megaprojects: Examining the Roles of Effective Project Governance and Trust.**

Muhammad Shoaib Iqbal, Riphah School of Business & Management, Riphah International University, 13 km Raiwind Rd, Lahore, Pakistan  
Shazia Nauman, Riphah School of Business & Management, Riphah International University, 13 km Raiwind Rd, Lahore, Pakistan

#### **ID 524 Mejora de las Operaciones y el Proceso de Limpieza en el Vidrio Templado**

Jorge Castillo Ramírez, Gaeta Sur, R8-302, Monterrey, Nuevo Leon, Mexico

**3:00 – 4:45 pm, THURSDAY**

**Modeling**

**Breakout Room 2 - Onsite**

Session Chair: Osvaldo Aquines, Director of Physics and Mathematics Department, Universidad de Monterrey

#### **ID 313 An Approach To The Modelling Of Honey Bee Colonies**

Alejandro Seferino, Facultad de Ciencias de la Educación, Universidad del Quindío, Colombia  
Jhoana P. Romero-Leiton, Centro de Estudios Interdisciplinarios Básicos y Aplicados, Colombia

#### **ID 371 The Impact Of Causes Of Considerable Deviations That Undermine Drivers Of Workforce Productivity Within The Mineral Exploration Industry In South Africa**

Lucky Makhubedu, University of Johannesburg, South Africa

#### **ID 372 State of 4ir at a South African Chain Store Supermarket**

Lucky Makhubedu, University of Johannesburg, South Africa

#### **ID 475 Modelo para detectar el estado glucémico en pacientes sanos.**

Luis Alejandro Guzmán Rangel, UDEM, Mexico

#### **ID 526 Extracción de Aceite de Aguacate**

Guadalupe Lara Sanchez, Jorge Alberto Lopez Coronado, Carlos Fernando Lopez Valdez, Marcelo P Isassi Paez, Mario Alberto Martinez Erosa, Pablo Lemarroy Sanchez, Jose Iñaki Loyola Rosales, Estudiantes de Ingeniería Industrial y de Sistemas, Instituto de Estudios Superiores de Monterrey, Monterrey Nuevo León

**3:00 – 4:45 pm, THURSDAY**

**Energy & Efficiency**

**Breakout Room 3 - Onsite**

Session Chair: Jesús Tamez. Computer Science and Industria Engineering. Universidad de Monterrey

#### **ID 477 Development of a Dashboard to Improve Fleet Maintenance for a Food Bank**

La'Tricha Parks, Steven Jiang and Lauren Davis, Department of Industrial and Systems Engineering, North Carolina A&T State University, Greensboro, NC 27411, USA



**ID 491 Assessment of the process of generation and final use of electric energy in Colombia based on energy efficiency indicators**

Juan Zapata-Mina, Melissa Valencia-Duque, Juan José Tabares y Juan Esteban Tibaquirá, Faculty of Mechanical Engineering, Universidad Tecnológica de Pereira, Pereira, Colombia

**ID 494 Performance Comparison for File Transfers for Four Advanced Networks in GNS3 under IPv6**

Jose-Ignacio Castillo-Velázquez, ADVNETLAB, Telecommunications Engineering Department, Autonomous University of Mexico City, Mexico City, México  
Monica Karel Huerta, Grupo de Telecomunicaciones GITEL, Universidad Politecnica Salesiana, Cuenca, Ecuador

**ID 496 Microgrid Supplier Selection Problem Considering Euclidean Distance and Ideal Vector System**

Trinidad Reyes and Jose F. Espiritu, Industrial Manufacturing and System Engineering Department, The University of Texas at El Pas, El Paso, TX 79968, USA

**ID 517 Role of Media in Africa Elections: A Comparative Analysis of Nigeria and Ivory Coast**

Harrison Oluwaseyi Ogunkalu, Eurasia Studies Department, Niğde Ömer Halisdemir Üniversitesi, Rectorate, Central Campus, Bor Yolu, Niğde 51240, Turkey  
Anthony ENIAYEJUNI, International Relations Department, Cyprus International University, Haspolat- TRNC, Mersin 10, Turkey

**ID 328 Systemic analysis of the electrification of last-mile freight transport**

Julieth Stefany García Collazos, Facultad de Minas, Universidad Nacional de Colombia, Medellín, Colombia  
Laura Milena Cárdenas, Facultad de Ingeniería, Universidad de Antioquia, Medellín, Colombia  
Carlos Jaime Franco, Facultad de Minas, Universidad Nacional de Colombia, Medellín, Colombia

**3:00 – 4:45 pm, THURSDAY****Industry Solutions II****Room 5 Virtual**

Session Chair: Faustino Zuñiga, Computer Science and Industria Engineering. Universidad de Monterrey

3:00 – 3:45 (Thursday, November 4)

Foad H Khanli  
Director of Quality Assurance, Performance and Business Improvement  
Amor Health Services, Inc., Brownsville, Texas, USA

Lean Six Sigma Black Belt Project – Reduction in Clients/Customers Lost, Improve Quality of Service and Clients Care

3:45 – 4:00 (Thursday, November 4)

Rachel Yager, Ph.D.  
Founder & CEO, FortuneTimes Group (FTG)  
Head of WebInnovation® Think Tank  
Head of W3C New York Metro Chapter  
President of Friends of NTU (FNTU) USA  
New York City, NY, USA

3:00 – 3:20 (Thursday, November 4)

Jesus Velasquez  
Mathematical Programming Entrepreneur & Researcher  
Chief Scientist  
Do Analytics LLC, Bogota, Colombia

3:20 – 3:40 (Thursday, November 4)

Ana Lucia Arango Montoya  
Senior Project Management  
Ceiba Software  
Medellín, Antioquia, Colombia

**3:00 – 4:45 pm, THURSDAY****Systems Engineering****Room 6 Virtual**

Session Chair: Aminta Garza, Physics and Mathematics Department. Universidad de Monterrey

**ID 052 Metro Red Line/Purple Line Fire Protection Systems and Equipment**

Michael Thomas, California State University, Los Angeles, California, United States

**ID 053 Impact of Canvas Total Activity on Learners' Performance**

Dr. Eli K. Aba, University of Wisconsin-Stout at Menomonie, Menomonie, WI 54751, 812-223-2557,

**ID 054 Applying Continuous Improvement in Academia**

Dr. Eli K. Aba, University of Wisconsin-Stout at Menomonie, Menomonie, WI 54751, 812-223-2557,

**ID 094 Curriculum Revision of a Ph.D. program in Technology Management to Keep it Relevant and Manageable**

A. Mehran Shahhosseini, M. Affan Badar, Farman A. Moayed, James N. McKirahan, and Cindy L. Crowder

College of Technology, Indiana State University, Terre Haute, IN 47809, USA

**ID 327 The concept of maintenance with a sustainable approach: a review of the literature based on content analysis**

Márian Pérez Pérez and Ángel Tomás Pérez Rodríguez, Department of Industrial Engineering and Chemistry Department, University of Holguín, Holguín, Cuba

Estrella María de la Paz Martínez, Postgraduate Education Department, Central University "Marta Abreu" de Las Villas, Santa Clara, Cuba

**ID 468 Achieving Mass Customization Through Integrating Human Factors in Product Platform Concepts During Product Design**

Oscar Ming Liu, Venkat Allada, Engineering Management and Systems Engineering Department, Missouri University of Science and Technology Rolla, MO 65401, USA

**3:00 – 4:45 pm, THURSDAY**

**Lean Six Sigma and Service**

**Room 7 Virtual**

Session Chair: Mario Garza, Civil and Management Engineering. Universidad de Monterrey

**ID 088 Manpower Reduction in Crankshaft Cell 3 Fabrication Line**

S.Karthik, Assistant Professor, Department of Mechanical Engineering, Veltech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, Avadi, Chennai, Tamilnadu, India

**ID 214 Productivity Improvement in a Sugar Company: A Lean management approach**

Maximiliano Arroyo Ulloa, Faculty of Engineering, Universidad Católica Santo Toribio de Mogrovejo, Chiclayo, Peru

Lucio Llontop Mendoza, Universidad Católica Santo Toribio de Mogrovejo, Chiclayo, Peru, Lima, Peru

Javier Beltran Reyes, Business Intelligence Department, Comercio-Group, Lima, Peru

**ID 253 Strategies to Improve the Logistics of a COVID-19 Screening Process within a Lean Six Sigma Framework**

Jeanne-Marie Lawrence, Teaching Instructor, Department of Technology Systems, College of Engineering and Technology, East Carolina University, Greenville, NC 27858, USA

**ID 229 Implementation of Six Sigma as Quality Improvement in a South African Municipality**

Paul Makibelo, Bheki Makhanya and Hannelie Nel, Department of Engineering Management, University of Johannesburg, South Africa

**ID 066 Fostering Creativity and Innovations based on Classification Schemes: Case Studies in Engineering Design Education**

Karl Hain and Christoph Rappl, Faculty of Mechanical Engineering and Mechatronics, DIT Deggendorf Institute of Technology, 94469 Deggendorf, Bavaria, Germany

## November 4, 2021 (Thursday) - Session: 5:00 – 6:45 pm

**5:00 – 6:45 pm, THURSDAY**

**Ballroom 1b**

**Relieve's Workshop on "Fuel Consumption in Heavy Duty Vehicles"**

**5:00 – 6:45 pm, THURSDAY**

**Industry Solutions III**

**Room 5 Virtual**

Session Chair: Ulises López Gonzales

5:00 – 5:20 (Thursday, November 4)

Aaron Rubel, M.S.E.M.

Head of Aircraft Maintenance Programs Development, Intellectual Property Focal Point

Airbus Americas, Inc., Mobile, Alabama Engineering Center, Mobile, AL 36615, USA

5:20 – 5:40 (Thursday, November 4)

Juan Carlos Martinez-Ovando, PhD

Chapter Lead in Data & Analytics

Grupo Rotoplas, Mexico City, Mexico

3:40 – 6:00 (Thursday, November 4)

Dr. Noor Farizah Ibrahim

Senior Lecturer, School of Computer Sciences

Universiti Sains Malaysia, Pulau Pinang, Malaysia

6:00 – 6:20 (Thursday, November 4)

Dr. Ihfasuziella Ibrahim, (CREAM, CIDB)

Researcher, Construction Research Institute of Malaysia (CREAM)

Kuala Lumpur, Malaysia

6:20 – 6:40 (Thursday, November 4)

Dr. Patricia Eugenia Sortillón González  
Industrial Engineering Professor  
Universidad de Sonora  
Hermosillo, Sonora, Mexico

6:40 – 7:00 (Thursday, November 4)

Bob Doering, MBA  
Quality Engineering Professional  
Expert in CorrectSPC for Precision Machining – Trainer, Consultant  
Lagrange, Ohio, USA

### 5:00 – 6:45 pm, THURSDAY

### Smart Mobility and Smart Cities

### Room 6 Virtual

Session Chair: Raúl Morales Salcedo, Computer Science and Industria Engineering. Universidad de Monterrey

#### **ID 490 Development of an On-Board System for Measuring the Implicit Variables of the Driving Cycle for 250cc Carbureted Motorcycles**

Ray Stevenson Amaya Maldonado, Santiago Uribe Jaimes and Jessica Gissella Maradey Lázaro, Mechatronics Engineering Program, Universidad Autónoma de Bucaramanga, Bucaramanga, Santander, Colombia

Jose Ignacio Huertas Cardozo, Mechanical Engineering Department, Tecnológico de Monterrey, Monterrey, Nuevo León, México

#### **ID 484 Energy efficiency analysis of the electric traction systems with simple traction drive and in-wheel motor.**

Sebastián Fernández Herrera, School of Automotive Mechanics, University of Azuay, Cuenca, Ecuador

Efrén Fernández Palomeque, School of Automotive Mechanics, University of Azuay, Cuenca, Ecuador

#### **ID 352 Three Decades of the Green City Study: A Bibliometric Perspective**

Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

Evaristus Didik Madyatmadja and Hendro Nindito, Information Systems Department, School of Information Systems, Bina Nusantara University, Jakarta 11480, Indonesia

Albert Verasius Dian Sano, Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta 11480, Indonesia  
Corinthias P.M. Sianipar, Department of Global Ecology, Graduate School of Global Environmental Studies (GSGES), Division of Environmental Science and Technology, Graduate School of Agriculture (GSA), Kyoto University, Kyoto 606-8502, Japan

#### **ID 370 Smart Living: Mapping of the Past Research for Future Living**

Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
Hendro Nindito and Evaristus Didik Madyatmadja, Information Systems Department, School of Information Systems, Bina Nusantara University, Jakarta 11480, Indonesia

Albert Verasius Dian Sano, Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta 11480, Indonesia  
Corinthias P.M. Sianipar, Department of Global Ecology, Graduate School of Global Environmental Studies (GSGES), Division of Environmental Science and Technology, Graduate School of Agriculture (GSA), Kyoto University, Kyoto 606-8502, Japan

### 5:00 – 6:45 pm, THURSDAY

### Entrepreneurship

### Room 7 Virtual

Session Chair: Xavier Cantú, Physics and Mathematics Department. Universidad de Monterrey

#### **ID 056 Applying Machine Learning Algorithms to Predict the Interest in Entrepreneurship among Engineering Students**

Magaly Sandoval, Carlos Hernández, Departamento de Ingeniería Industrial y Sistemas, Universidad de La Frontera, Temuco, Chile

#### **ID 467 Small-scale Manufacturing of Aluminium & Steel Products Inclusion in the Mainstream Economy**

Amogelang Bogadi Sabrina Setshedi and Michael Sizwe Mkwana, Faculty of Engineering and the Built Environment, University of Johannesburg, Cnr Kingsway Avenue & University Road, Auckland Park, South Africa

#### **ID 472 Novel In-Situ Aircraft Oxygen Cylinder Refilling Tool**

Allan D. Lang, BEng., Systems Engineers Oxygen Design Office, Airbus Americas Engineering, Inc., Mobile, Alabama, 36615, USA

Robert Thompson, Head of Flight Test Systems Engineering Support, Airbus North Americas Final Assembly Line, Mobile, Alabama, 36615, USA

#### **ID 303 Multi-Period Multi-Depot Location-Routing Problem for Mobile Center-based Last Mile Delivery**

Minseo Choi and Taesu Cheong, School of Industrial Management Engineering, Korea University, Seoul, 02841, South Korea

#### **ID 166 Developing a Performance Measurement Framework for Logistics Service Providers**

Paitoon Varadejsatitwong, Thammasat Business School, Thammasat University, Bangkok, Thailand

Ruth Banomyong, Dean, Thammasat Business School, Thammasat University, Bangkok, Thailand

Putthipong Julagasigorn, Thammasat Business School, Thammasat University, Bangkok, Thailand

#### **ID 394 Digital Transformation in Small Medium Enterprises: Mapping of the Knowledge Base**

Febby Candra Pratama and Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta 11480, Indonesia

Fairuz Iqbal Maulana, Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta 11480, Indonesia

Nana Abdul Aziz, Political Science and Public Administration, Bandırma University Turki, Bandırma 10200, Turki

Inggit Kresna Maharsih, Chemical and Materials Engineering, National Central University, Taoyuan City 320317, Taiwan (R.O.C.)

### 5:00 – 6:45 pm, THURSDAY

### Artificial Intelligence

### Room 8 Virtual

Session Chair: Gilberto Montes, Civil and Management Engineering. Universidad de Monterrey

**ID 308 A Classification Model based Spaced Repetition Approach using Facial Expressions and Hand Over Face (HOF) Gestures**

D. M. S. P. Dissanayaka and K. Wijayasiriwardhane, Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka

**ID 396 Deep Learning Based Platform for Vehicle Parts Defect Classification and Anomaly Detection**

Hanseok Seo and Taesu Cheong, School of Industrial and Management Engineering, Korea University, Seoul, 02841, South Korea

**ID 048 Synthesis and characterization of hydroxyapatite powder derived of eggshell by precipitation method**

Samira Tlili, Research Center in Industrial Technologies CRTI P.O.Box 64, Cheraga 16014 Algiers, Algeria

Saida Bouyegh, Research Center in Industrial Technologies CRTI P.O.Box 64, Cheraga 16014 Algiers, Algeria

Bilal Ariche, Badji Mokhtar University, Annaba, Algeria

Noura Traiaia, Research Center in Industrial Technologies CRTI P.O.Box 64, Cheraga 16014 Algiers, Algeria

Mohamed Hassanl, Research Center in Industrial Technologies CRTI P.O.Box 64, Cheraga 16014 Algiers, Algeria

**ID 258 Synthesis and characterization of hydroxyapatite powder derived of eggshell by precipitation method**

Samira Tlili, Saida Bouyegh, Kotbia Labiod, Noura Traiaia and Mohamed Hassani, Research Center in Industrial Technologies CRTI P.O.Box 64, Cheraga 16014 Algiers, Algeria

Bilal Ariche, Badji Mokhtar University, Annaba, Algeria

**ID 428 Preparation and characteristics of synthesized hydroxyapatite from bovine bones and by co-precipitation method**

Saida Bouyegh, Samira Tlili, Kotbia Labiod and Mohamed Hassani, Research Center in Industrial Technologies CRTI, Cheraga, Algiers, Algeria

Mohamed Grimet and Oussama Bensalem, Chemistry Department, Badji Mokhtar -Annaba University, Algeria

**ID 518 Study on the Legality of Indonesian Micro Business Products Based on Economic and Law Regulations**

Rr. Hermien Tridayanti, Rr. Iswachyu Dhaniarti, I Putu Artaya, Rizal Bahaswan, Adhi Prawito, Departement of Management, Departement of Law, Departement of Civil Engineering, University Narotama Surabaya, Indonesia

Devita Anggraini Lestari, Departement of Public Health, Airlangga University Surabaya, Indonesia

**ID 519 Investigation of Simple Moving Average: Pre-COVID-19 Evidence from the Tokyo Stock Exchange**

Wisnu Panggah Setiyono, Department of Management, Faculty of Business, Law and Social Science, Universitas Muhammadiyah Sidoarjo, Sidoarjo, East Java 61215, Indonesia

Liau Zheng Pin, Kinematic Business Management Sdn Bhd, Puchong Gateway, 47110 Puchong, Selangor, Malaysia

Tsabita Karima, Department of Digitally Business, Faculty of Business, Law and Social Science, Universitas Muhammadiyah Sidoarjo, Sidoarjo, East Java 61215, Indonesia

**5:00 – 6:45 pm, THURSDAY****Business Management****Room 9 Virtual**

Session Chair: Adrián Alcaraz, Civil and Management Engineering, Universidad de Monterrey

**ID 558 Macroeconomic Determinants of NAV (Composite Stock Price Index as Variable Z)**

Firly Irahmani S.I.P., M.M and Vina Safiyyah S.M., Department of Management, Faculty of Economics and Business, Universitas Nahdlatul Ulama Surabaya, Indonesia

**ID 565 Spiritual Leadership and Employee Performance: The Mediating Role of Employee Engagement**

Muadi Heryawan, Joko Suyono, Nurul Aini, Narotama University, Surabaya, Indonesia

Damarsari Ratnasahara Elisabeth, STIE Mahardhika Surabaya, Surabaya, Indonesia

Sukaris, University of Muhammadiyah Gresik

**ID 566 Tax Relaxation During the Covid -19 Pandemic Against Individual Taxpayer Compliance in SPT Reporting at the Pondok Aren Tax Service Office, South Tangerang City**

Ambarwati and Indra Sumarna Sobari and Rudi Kristanto, Institut Ilmu Sosial dan Manajemen STIAMI, Jakarta, Indonesia

Agus Sunarya Sulaeman and Muhammad Heru Akhmadi, Politeknik Keuangan Negara STAN, Jakarta, Indonesia

**ID 567 The Effect of Intelligence Quotient and Emotional Quotient on Lecturer Performance Mediated by Creativity**

Hery Winoto Tj, Melitina Tecolau, Fredella Colline, Daniel Widjaja and Roseline Mannuela, Center of Innovation in Applied Management and Behavioral Economy (CIAMBE), Faculty of Economics and Business, Krida Wacana Christian University

**ID 568 The Mediating Role of Dividend Policy in Relationship Between Profitability and Firm Size on Firm Value**

Ivan Wijaya, Nurul Aini, Joko Suyono, Zetayu Vinata Meriel, Narotama University

Damarsari Ratnasahara Elisabeth STIE Mahardhika Surabaya, Indonesia

**ID 569 The Mediating Role of Job Satisfaction in Relationship Between Organizational Commitment and Employee Performance**

Abdul Hamid, Hermien Tridayanti, Hendry Eka Prastiya, Tri Utoyo, Joko Suyono, Narotama University, Surabaya, Indonesia

**ID 556 Analysis of Risk Based Capital and EWS as Early Warning of Risk Factors in Sharia Life Insurance Companies and Sharia Life Insurance Units in Indonesia**

Firly Irahmani and Denis Fidhita Karya, Department of Management, Faculty of Economic and Business, Universitas Nahdlatul Ulama Surabaya Surabaya Indonesia

**November 4, 2021 (Thursday) - Session: 7:00 – 8:45 pm****7:00 – 11:00 pm, THURSDAY****Business Management****Room 5 Virtual**

Session Chair: Dr. Mohammed Ikhsan, Notoroma University, Indonesia



**ID 181 Coordinating Gamification in a Blended Learning Entrepreneurship Course: Discussing Student Learning and Achievement Motivation**

Nisaul Barokati Seliro Wangi, Universitas Islam Darul 'Ulum Lamongan, Indonesia  
 Ulfah Mey Lida, IAIN Kudus, Indonesia  
 Veni Nurpadillah, IAIN Cirebon, Indonesia  
 Yunita Suryani, Universitas PGRI Ronggolawe, Indonesia  
 Ninik Mardiana, University Dr. Soetomo Surabaya, Indonesia

**ID 182 Arranging the Reliable and Valid Assessment's Instrument for Business Model Canvas Comprehension**

Nisaul Barokati Seliro Wangi, Universitas Islam Darul 'Ulum Lamongan, Indonesia  
 Rokhmad Budiyo, Sekolah Tinggi Ilmu Ekonomi Semarang, Indonesia  
 Dwi Novaria, IAIN Pekalongan, Indonesia  
 Ratna Nurdiana, Universitas PGRI ADIBUANA Surabaya, Indonesia  
 Ahmad Hariyadi, IKIP PGRI Bojonegoro, Indonesia

**ID 410 The Cultural Dimension of Entrepreneurial Leaders in Sundanese Society**

Mulyani Karmagatri, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Hazmilah Hasan, Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka, Malaysia  
 Andreas Chang, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

**ID 415 The Impact of Destination Attribute to Traveling Decision in New Normal**

Erma Lusia, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Mulyani, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Doni Purnama Alamsyah, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

**ID 421 The Effect Of Digital Marketing And Brand Trust On The Decision To Use Digital Wallet Funds In Bandung City Community**

Jalil Nur Rahman, Muhammad Yahya Arwiyah, and Mahir Pradana, Program Studi Administrasi Bisnis, Telkom University, Bandung, Indonesia

**ID 430 Robust Least Squared Model: How to Maintain Brand Loyalty at Starbucks Indonesia**

Sidik Budiono, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia  
 John Tampil Purba, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia

**ID 581 Sustaining Customers In The Pandemic Period Through Shariah Marketing Strategy Based On Human Spirit**

Fadali Rahman<sup>1</sup>, Muhammad Wildan Fawaid<sup>2</sup>, Aang Kunaifi<sup>3</sup>, Abd. Rosyid<sup>4</sup>, 1,3,4Institut Agama Islam Al-Khairat Pamekasan, East Java Indonesia  
 2Institut Agama Islam Negeri Kediri, East Java Indonesia

**ID 583 The Influence Of Conference Class Technology Using Zoom On E-learning In The Covid-19 Pandemic**

Albert Riyandi<sup>1</sup>, Bambang Wijonarko<sup>2</sup>, Aji Sudibyo<sup>3</sup>, Imron Imron<sup>4</sup>, M. Sinta Nurhayati<sup>5</sup>, STMIK Nusa Mandiri 1, Universitas Bina Sarana Informatika 2,3, Jl. Jati Waringin no 2 Jakarta Indonesia<sup>1</sup>, Jl. Kramat 98 Jakarta Indonesia

**ID 634 Characteristics Of Vegetable Canistel Mousse Dessert (Pouteria campechiana) Using Polysaccharide Stabilizer**

Etty Hesthiati, Inkorena GS Sukartono, Tri Waluyo and Nurul Hanifah, Faculty of Agriculture, Universitas Nasional, Indonesia

**ID 635 Survey of Dugongs (Dugong Dugon) On Cempedak Island, West Kalimantan**

Galih Hakim Antarnusa And Achmad Yanuar, Department of Biology Graduate School, Universitas Nasional, Menara UNAS II, Jl. Harsono RM, Ragunan, Jakarta Selatan 12550, Indonesia  
 Richard Moore, Yayasan IAR Indonesia, Jl. Curug Nangka, Kp. Sinarwangi Ciapus – Bogor, Indonesia  
 Urai Iskandar, Yayasan Webe Konservasi Ketapang, Jl. RM Sudiono no.49A, Kelurahan Kantor, Kecamatan Delta Pawan, Ketapang, Kalimantan Barat, Indonesia

**ID 636 Process Improvement for High Precision Components at Medical Devices Company (MDC)**

Gamaliel Negrón Guzmán, Joshua Ríos Vachier and Jannette Pérez-Barbosa, Department of Engineering, Universidad Ana G. Méndez, Gurabo, Puerto Rico 00778, USA

**ID 637 Model of Strengthening Technology Literacy for Junior High School Teachers in the Era of the Industrial Revolution 4.0**

Soewarto Hardinata, Yudhie Suchyadi and Dian Wulandari, Education Management Study Program, Graduate School, Universitas Pakuan, Bogor, Indonesia

**ID 638 Using a Multimedia for natural Science Learning in Improving Concept skills of Elementary School Teachers**

Yudhie Suchyadi, Oding Sunardi, Eka Suhardi, Fitri Siti Sundari, Fitri Anjaswuri, and Dita Destiana, Faculty of Teacher Training and Education, Universitas Pakuan, Bogor, Indonesia

**ID 646 Experiences of the Yapis in Extending Human Resources in Tanah Papua**

Rudihartono Ismail, Universitas Amal Ilmiah Yapis Wamena, Indonesia  
 Helmawati Helmawati, Universitas Islam Nusantara, Indonesia  
 Ismail Suardi Wekke, Institut Agama Islam Negeri (IAIN) Sorong, Indonesia, The Jusuf Kalla Research Center for Bugis Makassar Cultural Studies, Universitas Muslim Indonesia  
 Didiharyono Didiharyono, Andi Djemma University, Palopo, Indonesia

**ID 647 Educational Technology in Higher Education on Pandemic Covid-19 Experiences**

Ismail Suardi Wekke, Institut Agama Islam Negeri (IAIN) Sorong, Indonesia, Asosiasi Dosen Insan Cita Indonesia, Indonesia, The Jusuf Kalla Research Center for Cultural Studies, Universitas Muslim Indonesia  
 Muhammad Ihsan, Universitas Pendidikan Muhammadiyah Sorong, Indonesia

Muhammad Rusdi Rasyid, Institut Agama Islam Negeri (IAIN) Sorong, Indonesia  
 Rudihartono Ismail, Universitas Amal Ilmiah Yapis Wamena, Indonesia  
 Muhammad Makbul, UIN Alauddin Makassar, Indonesia

**ID 648 Designing the Sustainable Collaboration among the Local Government, Community and Academics: The Sharia-Based Economic Growth**

Mohd. Heikal, Muammar Khaddafi, Rico Nur Ilham, Fuadi, Faculty of Economics and Business Universitas Malikussaleh, Blang Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia  
 Isfenti Sadalia, Department of Management, Universitas Sumatera Utara, Medan Baru, Medan, 20222 Sumatera Utara, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 649 A Study of Micro, Small and Medium Enterprises (MSMEs) during Covid-19 Pandemic: An Evidence using Economic Value-Added Method**

Wahyuddin, Marzuki, Muammar Khaddafi, Rico Nur Ilham, Faculty of Economics and Business, Universitas Malikussaleh, Blang Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia  
 Irada Sinta, Faculty of Agriculture, Universitas Malikussaleh, Releut, Aceh Utara, 24355 Aceh, Indonesia

**ID 650 Underlying Mechanisms of Transit-Oriented Development: A Conceptual System Dynamics Model; the case for Qatar**

Aya Hasan AlKhereibi, Qatar Transportation and Traffic Safety Center, College of Engineering, Qatar University, Doha, Qatar  
 Nuri Onat, Qatar Transportation and Traffic Safety Center, College of Engineering, Qatar University, Doha, Qatar  
 Raffaello Furlan, Department of Architecture and Urban Planning College of Engineering, Qatar University, Doha, Qatar

**7:00 – 8:45 pm, THURSDAY**

**Business Management**

**Room 6 Virtual**

Session Chair: Saima Afsheen and Mohd Lizam, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia

**ID 179 Managing Islamic Elementary Students' Reading Skill through SQ3R Strategy**

Yuli Ani Setyo Dewi, Sekolah Tinggi Ilmu Tarbiyah NU Al Hikmah Mojokerto, Indonesia  
 Indrya Mulyaningsih, Institut Agama Islam Negeri Syekh Nurjati Cirebon, Indonesia  
 Winci Firdaus, Badan Pengembangan dan Pembinaan Bahasa, Indonesia  
 Ixsir Eliya, IAIN Bengkulu, Indonesia  
 Vita ika sari, universitas pancasakti tegal, Indonesia

**ID 180 Management of Information and Communication Technology (ICT) Learning Packages**

Riza Faishol, Institute Agama Islam (IAI) Ibrahimy Genteng Banyuwangi, Indonesia  
 Syihaabul Huda, Institut Teknologi dan Bisnis Ahmad Dahlan Jakarta, Indonesia  
 Asrizal Wahdan Wilsa, STKIP NU Indramayu, Indonesia  
 Kiftian Hady Prasetya, Universitas Balikpapan, Indonesia  
 Ari Musdolifah, Universitas Balikpapan, Indonesia

**ID 422 The Influence of Organizational Culture on Employee Performance at Pt Sipatex Putri Lestari Majalaya Bandung**

Syaiful Marwan, Bachruddin Saleh Lutarlean, Program Studi S1 Administrasi Bisnis, Fakultas Komunikasi dan Bisnis, Universitas Telkom

**ID 431 Robust Least Squared: To Build Consumer's Purchase Intention at Louis Vuitton Indonesia**

Sidik Budiono, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia  
 John Tampil Purba, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia  
 Wilson Rajagukguk, Faculty of Economics and Business, Universitas Kristen Indonesia, Jl. Mayjen Sutojo No.2, Cawang, Jakarta 13630, Indonesia

**ID 297 Preschool Selection Criteria Amongst Parents using Best Worst Method (BWM)**

Fatin Athirah Noor Azmi, Department of Production and Operation Management, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, 86400, Batu Pahat, Johor, Malaysia  
 Rohaizan Ramlan, Centre of Research on Service and Operations Management (CRSOM), Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, 86400, Batu Pahat, Johor, Malaysia  
 Shahryar Sorooshian, Department of Business Administration, University of Gothenburg, 41124 Gothenburg, Sweden

**ID 302 Do mortgage loan influence the housing price in Malaysia? An ARDL Approach**

Saima Afsheen and Mohd Lizam, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia

**ID 573 Confucian Values on Disability**

Kristan, Character Building Development Center, Computer Science Department, School of Computer Science, Bina Nusantara University Jakarta, Indonesia  
 Nuah P. Tarigan, Universitas Pelita Harapan, Doctor of Research in Management in Education Leadership program, Jakarta, Indonesia

**7:00 – 8:45 pm, THURSDAY**

**Business Management**

**Room 7 Virtual**

Session Chair: Phuong Hoa Hoang, English Program of Global Business, Chinese Culture University, Taipei, Taiwan

**ID 176 Development Of Text Negotiation Learning Using Edmodo**

Muh Barid Nizarudin Wajdi, STAI Miftahul Ula Nganjuk, Indonesia  
 Winci Firdaus, Badan Pengembangan dan Pembinaan Bahasa  
 Franscy, Universitas Panca Sakti Bekasi, Indonesia  
 Idhofiyatul Fathin, Sekolah Tinggi Ilmu Ekonomi Semarang, Indonesia  
 Muthia Damayanti, Politeknik Negeri Padang, Indonesia

**ID 177 Execution of Information Technology (IT) in Education Marketing**

Yusuf Hamidi, STAI Darussalam Krempyang Nganjuk, Indonesia  
 Natoil, Sekolah Tinggi Ilmu Ekonomi Semarang, Indonesia  
 Siti Rochmah, Sekolah Tinggi Ilmu Ekonomi Semarang, Indonesia  
 Fidyah Yuli Ernawati, Sekolah Tinggi Ilmu Ekonomi Semarang, Indonesia  
 Siti Aniqoh Shofwani, Sekolah Tinggi Ilmu Ekonomi Semarang, Indonesia

**ID 311 Examining the Factors that Influence Consumer Willingness to Pay of Bubble Tea among Generation Z in Bandung, Indonesia**

Raden Aswin Rahadi, Candice Iswara, Kurnia Fajar Afgani, School of Business and Management, Institut Teknologi Bandung, Bandung, West Java 40132, Indonesia  
 Alfred Boediman, University of Chicago Booth School of Business, Hong Kong, 168 Victoria Rd, Mount Davis, Hong Kong, China  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia

**ID 312 Exploring the Drivers of Intention to Use Electronic Money of Small and Medium Enterprises (SMEs) in Indonesia**

Raden Aswin Rahadi, Pauline Xena, Kurnia Fajar Afgani, Lidia Mayangsari, School of Business and Management, Institut Teknologi Bandung, Bandung, West Java 40132, Indonesia  
 Dwi Rahmawati, Sekolah Tinggi Ilmu Ekonomi Ekuitas, Neglasari, Cibeunying Kaler, Bandung, 40124 Jawa Barat, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia

**ID 009 Business Plan Considerations for a Small Scale Mining Operation**

Mercy Manyuchi, Department of Operations and Quality Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa  
 N. Sukdeo, Department of Operations and Quality Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

**ID 402 An integration approach of multi-structure DEA and random vector functional link neural network in benchmarking modelling and forecasting**

Phuong Hoa Hoang, English Program of Global Business, Chinese Culture University, Taipei, Taiwan  
 Sin-Jin Lin, Department of Accounting, Chinese Culture University, Taipei, Taiwan  
 Ming-Fu Hsu, Department of Business Management, National United University, Miaoli, Taiwan

**7:00 – 8:45 pm, THURSDAY****Healthcare Operations and Services****Room 8 Virtual**

Session Chair: Duaa Nawafleh, Engineering Management Program, Arkansas State University, AR 72467, USA

**ID 210 Optimizing Shift Scheduling for Medical Personnel an Application in the Manufacture of Medical Outpatient Services**

Hernando Garzón Saenz  
 CIPTEC research group - Faculty of Engineering - Technology Program in Industrial Production Fundacion Universitaria Tecnológico Comfenalco Cartagena de Indias, Colombia  
 Andrés Redchuk, Director of Operational Excellence and Process Improvement Institute. School of Engineer, University of Lomas de Zamora. Argentina. Department of Computer Sciences. University Rey Juan Carlos. Madrid. Spain

**ID 393 Factor Analysis on Consumer Behavior Intention to Use Homecare Application for Veterinarian using Structural Equation Model**

Anak Agung Ngurah Perwira Redi and Fredlina Margaret, Department of Industrial Engineering, BINUS Graduate Program – Master of Industrial Engineering, Universitas Bina Nusantara, DKI Jakarta, 11480, Indonesia  
 Reny Nadlifatin, Department of Information System, Institut Teknologi Sepuluh Nopember, Surabaya, 60111, Indonesia  
 Adji Candra Kurniawan, Department of Logistics Engineering, Universitas Pertamina, DKI Jakarta, 12220, Indonesia  
 Anisa Larasati, Business Management Department, Universitas Bina Nusantara, DKI Jakarta, 11480, Indonesia  
 Safarudin Gazali Herawan, Industrial Engineering Department, Faculty of Engineering, Universitas Bina Nusantara, DKI Jakarta, 11480, Indonesia  
 Ketut Budhi Riyanta, PT Medika Nusantara Gumilang (Medi-Call), DKI Jakarta, 11480, Indonesia

**ID 434 Factors Influencing the Diffusion of Telehealth in Home Visit Medical Services**

Adji Candra Kurniawan, Fiki Rohmatul Maula, Koulana Tsakiilaa, Department of Logistics Engineering, Universitas Pertamina, DKI Jakarta, 12220, Indonesia  
 Anak Agung Ngurah Perwira Redi, Department of Industrial Engineering, BINUS Graduate Program – Master of Industrial Engineering, Universitas Bina Nusantara, DKI Jakarta, 11480, Indonesia  
 Bobby Ardiansyahmiraja, Department of Technology Management, Institut Teknologi Sepuluh Nopember, Surabaya, 60111, Indonesia  
 Reny Nadlifatin, Department of Information System, Institut Teknologi Sepuluh Nopember, Surabaya, 60111, Indonesia  
 Anisa Larasati, Business Management Department, Universitas Bina Nusantara, DKI Jakarta, 11480, Indonesia  
 Safarudin Gazali Herawan, Industrial Engineering Department, Faculty of Engineering, Universitas Bina Nusantara, DKI Jakarta, 11480, Indonesia  
 Ketut Budhi Riyanta, PT Medika Nusantara Gumilang (Medi-Call), DKI Jakarta, 11480, Indonesia

**ID 027 Mobile Application Design for Managing Preventive Maintenance Information for Neonatal Respirators**

Jhonatan Junnior Anaya Medina, Diego Daniel Martínez Calderón, and José Antonio Taquia Gutiérrez, School of Engineering and Architecture, University of Lima, Peru

**ID 031 Risk Factors and Prediction of ST-segment Elevation Myocardial Infarction**

Joshua Emakhu, Leslie Monplaisir, Celestine Aguwa, and Sara Masoud, Department of Industrial and Systems Engineering, Wayne State University Detroit, MI 48201, USA  
 Suzan Arslanturk, Department of Computer Science, Wayne State University, Detroit, MI 48201, USA  
 Egbe-Etu Etu, Department of Marketing and Business Analytics, San Jose State University, San Jose, CA 95192, USA  
 Joseph Miller, Department of Emergency Medicine and Internal Medicine, Henry Ford Hospital, Detroit, MI 48202, USA

**ID 305 Resource Allocation Models to Meet the United States Hospitals Urgent Need of Ventilators During the COVID-19 Pandemic**

Duaa Nawafleh, M.Sc., Alexandr M. Sokolov, Ph.D., and Niamat Ullah Ibne Hossain, Ph.D., Engineering Management Program, Arkansas State University, AR 72467, USA

**7:00 – 8:45 pm, THURSDAY****Industrial Services****Room 9 Virtual**

Session Chair: Thakaramahlaha Leholahla, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

**ID 441 Brand Trust, Price, Perceived Value and Brand Image as Mediation toward Purchase Intention of Aircraft Tickets in Traveloka in the era of Pandemic Covid-19**

E-Joo and John Tampil Purba, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang, Indonesia  
 Sidik Budiono, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia

**ID 447 Managing Risk with the Concept of SCRM on Procurement and Warehouse Department**

Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia  
 Bahtiar H. Simamora, Department of Management, Binus Business School, Bina Nusantara University Jakarta, Indonesia  
 Vikas Kumar, Bristol Business School, University of the West of England, Bristol, BS16 1QY, UK

**ID 448 Risk Mitigation for Strengthening Supply Chain Strategies in the Pandemic Era**

Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia  
 Bahtiar H. Simamora, Department of Management, Binus Business School, Bina Nusantara University Jakarta, Indonesia  
 Vikas Kumar, Bristol Business School, University of the West of England, Bristol, BS16 1QY, UK

**ID 449 Preventive Maintenance on Main Components of PT KA Indonesia Transportation Equipment**

Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia  
 Bahtiar H. Simamora, Department of Management, Binus Business School, Bina Nusantara University Jakarta, Indonesia  
 Vikas Kumar, Bristol Business School, University of the West of England, Bristol, BS16 1QY, UK

**ID 453 The Influence of Mobile Experience Design on Brand Satisfaction**

Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia  
 Bahtiar H. Simamora, Department of Management, Binus Business School, Bina Nusantara University Jakarta, Indonesia  
 Vikas Kumar, Bristol Business School, University of the West of England, Bristol, BS16 1QY, UK

**ID 454 Optimizing Raw Material Orders Using a Comparison of Deterministic and Probabilistic Methods**

Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia  
 Bahtiar H. Simamora, Department of Management, Binus Business School, Bina Nusantara University, Jakarta, Indonesia  
 Vikas Kumar, Bristol Business School, University of the West of England, Bristol, BS16 1QY, UK

**ID 455 Using E-Procurement to Minimize Risks in Customer Service**

Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia  
 Bahtiar H. Simamora, Department of Management, Binus Business School, Bina Nusantara University Jakarta, Indonesia  
 Vikas Kumar, Bristol Business School, University of the West of England, Bristol, BS16 1QY, UK

**ID 028 The key essentials for AFCTA for competitive regional value chains**

Thakaramahlaha Leholahla, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

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## November 4, 2021 (Thursday) - Session: 7:00 – 8:45 pm

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**9:00 – 10:45 pm, THURSDAY****Business Management****Room 5 Virtual**

Session Chair: Dr. Mohammed Ikhsan, Notoroma University, Indonesia

**ID 225 Comparison of Customer Segmentation for Private Label Products Using Clustering Algorithms**

Carlos Hernández, Magaly Sandoval, Departamento de Ingeniería Industrial y Sistemas, Universidad de La Frontera, Temuco, Chile

**ID 147 The Impact of the Use of Power on Supplier Integration in Different Cultural Settings: A Conceptual Investigation**

Tesfaye Tolu Feyissa, Assistant Professor, Defense University, Bishoftu, Ethiopia.  
 Anjali Sharma, Dept. of Industrial & Management Eng, Indian Institute of Technology-Kanpur, U.P. -208016, India  
 R.R.K. Sharma, Professor, Department of Industrial and Management Engineering, Indian Institute of Technology, Kanpur, 208 016, UP, India.

**ID 062 A Bibliometric Perspective of Facebook Research in Business & Management during Two Decades**

Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Andre Septianto, Institute for Research and Community Services, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
 Fairuz Iqbal Maulana, Computer Science Department, Bina Nusantara University, Jakarta 11480, Indonesia  
 Khoiriyatun Nahdiyah, Elementary Education Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
 Zaha Azzahira, Communication Science Department, Universitas Airlangga, Surabaya 60115, Indonesia

**ID 152 The Effect Of Work Discipline And Motivation On Employee Performance In Commercial Department Pt. Smartfren Telecom Tbk Jakarta**

Yhonanda Harsono, Management Departement Universitas Pamulang Tangerang Selatan, Indonesia  
 Munarsih, Management Departement Universitas Pamulang Tangerang Selatan, Indonesia  
 Ridhwan Noor Alam, Management Departement Universitas Pamulang Tangerang Selatan, Indonesia  
 Ria Estiana, Business Administration Departement Polytechnic LP3I Jakarta, Indonesia  
 Nurul Giswi Karomah, Business Administration Departement Polytechnic LP3I Jakarta, Indonesia

**ID 161 The Influence of Entrepreneurial Orientation on Competitive Advantage and Company Performance**



M. Sulhan, Yudharta University of Pasuruan, Indonesia  
 Wahyu Astutik, College of Administrative Sciences Panglima Sudirman Surabaya  
 Dodik Wahyono, College of Administrative Sciences Panglima Sudirman Surabaya  
 Muhammad Arifin, College of Administrative Sciences Panglima Sudirman Surabaya  
 Moh. Mukhrojin, College of Administrative Sciences Panglima Sudirman Surabaya

**ID 163 Development of E-Learning Learning Media Using Google Classroom In Indonesian Subjects (Biographical Text)**

Misbahul Munir, Universitas Negeri Jakarta  
 Endry Boeriswati, Universitas Negeri Jakarta  
 Gusti Yarmi, Universitas Negeri Jakarta

**ID 170 Digital Age Education and its Applications in Higher Education**

Nisaaul Barokati Seliro Wangi, Universitas Islam Darul U'lum Lamongan  
 Winci Firdaus, Badan Pengembangan dan Pembinaan Bahasa  
 Ryan Angga Pratama, Balikpapan University  
 Yogi Purnama, Universitas Indraprasta PGRI  
 Edwar Kemal, STKIP PGRI Sumbar

**ID 664 The Impact of Covid-19 on Micro, Small, and Medium Enterprises in Central Java, Indonesia: The Need for Economic Recovery**

Wiwini Widiastuti, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 665 A Study of Anticipating Post Pandemic "Tsunami" of Psychiatric Illness: A Public Psychiatry Approach**

Candra Ramadhanny, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 666 Review: Floating Homes Transportation Opportunities in Indonesia**

Arie Indartono, Shipbuilding Institute of Polytechnic Surabaya (PPNS) and Department of Shipbuilding Engineering Technology, Department of Marine Electrical Engineering Technology, Surabaya, Jawa Timur, Indonesia  
 Mohammad Basuki Rahmat, Department of Marine Electrical Engineering Technology, Surabaya, Jawa Timur, Indonesia  
 Sri Wiwoho Mudjanarko, Rizal Bahaswan, Civil Engineering Faculty, Narotama University Surabaya, Jawa Timur, 60117, Indonesia  
 Joewono Prasetyo, Department of Transportation Engineering Technology, Universiti Tun Hussein Onn Malaysia, 84600 Pagoh, Johor, Malaysia  
 Mohd Idrus Mohd Masirin, Department of Civil Engineering, Universiti Tun Hussein Onn Malaysia, Malaysia

**ID 668 Consumer entrepreneurship on online media: Issues and Potential Approaches for Business Models**

Ted Minshall, The Institute for Manufacturing, University of Cambridge, Cambridge, United Kingdom

**9:00 – 10:45 pm, THURSDAY**

**Business Management**

**Room 6 Virtual**

Session Chair: Galo Paiva, Departamento de Ingeniería Industrial y Sistemas, Universidad de La Frontera, Temuco, Chile

**ID 171 Android-Based Interactive Multimedia Development Integration Of Poetry Text Material With Islamic Values**

Tuti Kusniarti, Universitas Muhammadiyah Malang  
 Dina Putri Juni Astuti, IAIN Bengkulu  
 Wahyudi Rahmat, STKIP PGRI Sumatera Barat  
 Samsiarni, STKIP PGRI Sumatera Barat  
 Aruna Laila, STKIP PGRI Sumbar

**ID 172 Investigation of Early Study Stage for Young Researcher**

Diah Ambarumi Munawaroh, Instructional Technology Department, Universitas Negeri Malang, Indonesia, cvsafeerana@gmail.com  
 I Nyoman Sudana Degeng, Instructional Technology Department, Universitas Negeri Malang, Indonesia, nyomandegeng@gmail.com  
 Henry Praherdiono, Instructional Technology Department, Universitas Negeri Malang, Indonesia, praherdiono@gmail.com  
 Dedi Kusnadi, Instructional Technology Department, Universitas Negeri Malang, Indonesia

**ID 173 The Pyramid of Political Power as Mataraman Community Identity in Kediri Indonesia**

Taufik Alamin, Darsono Wisadirana, Sanggar Kanto, Hilmy Mochta and Wawan Sobari, Brawijaya University Malang

**ID 174 The Influence Of "Ruang Guru" Platform Learning Model On The Learning Outcomes**

Nisaaul Barokati Seliro Wangi, Universitas Islam Darul U'lum Lamongan  
 Deden, Balikpapan University  
 Nurlia Latipah, IAIN Bengkulu  
 Ikke Wulan Dari, IAIN Bengkulu  
 Akhirudin, IAIN Bengkulu

**ID 175 Development of Learning Media Text Tutorials Video-Based Procedures Screencast O Matic**

Hetlaniar, Universitas PGRI Palembang  
 Nisaaul Barokati Seliro Wangi, Universitas Islam Darul U'lum Lamongan  
 Dian Jelita, IAIN Bengkulu  
 Suantoko, Universitas PGRI Ronggolawe  
 Asri Wahyuni Sari, STKIP PGRI SUMBAR

**ID 093 Incorporated Fuzzy Robust Principal Component Analysis with Context-Dependent Data Envelopment Analysis for an Advanced Decision Making Process**

Fu-Hsiang Chen, Department of Accounting, Chinese Culture University, Taipei, Taiwan, R.O.C.  
 Te-Min Chang, Department of Information Management, National Sun Yat-sen University, Kaohsiung, Taiwan, R.O.C.  
 Hsueh-Li Huang, English Program of Global Business, Chinese Culture University, Taipei, Taiwan, R.O.C.  
 Sin-Jin Lin, Department of Accounting, Chinese Culture University, Taipei, Taiwan, R.O.C.  
 Ming-Fu Hsu, Department of Business Management, National United University, Miaoli, Taiwan, R.O.C.  
 Yu-Lin Huang, English Program of Global Business, Chinese Culture University, Taipei, Taiwan, R.O.C.

**ID 055 Building Models Based on Artificial Neural Networks to Predict Customer Loyalty**

Galo Paiva, Carlos Hernández, Departamento de Ingeniería Industrial y Sistemas, Universidad de La Frontera, Temuco, Chile

**ID 663 A Study of Collaborative Governance and Its Effect on Tourism Sector during the COVID-19 Pandemic in Indonesia**

Vonny Farizky, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 661 The Implementation of the Independent Learning Campus Policy: Private Universities Dilemma**

Rahmawati, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 662 Collaborative Governance on Slum Upgrading in Cultural Heritage Area: A Case Study of Pulau Penyengat, Indonesia**

Surjadi, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 669 Improving Concrete Quality on Structural using Lightweight Aggregates (LWA): A Comprehensive Review**

L. Oksri Nelfia and Candra Supriyatna, Civil Engineering Department, Universitas Trisakti, Jakarta, Indonesia  
 Agung Sumarno, Research Center for Biomaterials – Indonesian Institute of Sciences

**9:00 – 10:45 pm, THURSDAY****Entrepreneurship****Room 7 Virtual**

Session Chair: Suren Peter, Department of Industrial Management, University of Kelaniya, Dalugama, Kelaniya, Sri Lanka

**ID 059 Mapping of New Venture Creation Publication Themes: A 35-Year Overview**

Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Nur Afia, Institute for Research and Community Services, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
 Kuku Lukiyanto, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Raden Dafi Dinansyah Wiradimadja, Environmental Science Department, Mie University, Mie 5148507, Japan  
 Diana Yuniarti, Elementary Education Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

**ID 060 Rural Entrepreneur Publication: Insights from Bibliometric Application between 1985 and 2020**

Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Nazula Firdausi, Institute for Research and Community Services, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
 Elsa Rosyidah, Environmental Engineering Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
 Siti Aminatus Sholichah, Elementary Education Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
 Ajie Muhammad Ichsan Susila, Psychology Department, Universitas Padjadjaran, Sumedang 45363, Indonesia

**ID 357 Knowing the SMEs Strategy Research around the World Using a Bibliometric Approach**

Febby Candra Pratama and Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta 11480, Indonesia  
 Robertus Tang Herman, Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
 Fairuz Iqbal Maulana, Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta 11480, Indonesia  
 Galuh Windang Nuraulia, Economic Education Department, Universitas Negeri Malang, Malang 65145, Indonesia

**ID 369 Implementation of MSMEs Competitiveness Improvement Model to Strengthen Entrepreneurial Aspects in Malang City**

Ajeng Mira Herdina, Riesta Devi Kumalasari, Priska Arindya Purnama and Murniati, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

**ID 395 Knowing The Facts of SMEs Performance Research in Indonesia Using Bibliometric Approach**

Febby Candra Pratama and Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta 11480, Indonesia  
 Fairuz Iqbal Maulana, Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta 11480, Indonesia  
 Nana Abdul Aziz, Political Science and Public Administration, Bandırma University Turki, Bandırma 10200, Turki  
 Inggit Kresna Maharsih, Chemical and Materials Engineering, National Central University, Taoyuan City 320317, Taiwan (R.O.C.)

**ID 005 The Impact Of Workspace Design On Office Managers/Secretaries Satisfaction And Productivity: A Case Study Of Federal Polytechnic Kaura Namoda, Zamfara State**

Maikudi Shehu Musawa, Department of Office Technology and Management, Federal Polytechnic, Kaura Namoda, Zamfara State.

Kamilah Ahmad, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia

**ID 256 Model to Assess Behavioral Intention of Entrepreneurs - Adoption of Crowdfunding Platforms**

Sayuri Perera and Suren Peter, Department of Industrial Management, University of Kelaniya, Dalugama, Kelaniya, Sri Lanka

**ID 658 Handling the Children Sexual Violence: Women's Leadership Perspective**

Natta Sanjaya, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia

Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 659 The Impact of COVID-19 Pandemic on Sustainable Development in Southeast Asia**

Noorvita Ika Mardianti, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia

Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 660 Local Government Public Service Quality Innovation in Bengkulu City: A Case Study of SAMSAT VIRTU Application**

Novliza Eka Patrisia, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia

Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 671 Semi-Modern Market Competitiveness Strategy in the Era of Digital Disruption**

Fredi Andria, Sri Hartini, and Sri Nursanti, Department of Management, Faculty of Economics and Business, Pakuan University, Bogor, Indonesia

**ID 672 Formulating an Investment Strategy in the Indonesian Capital Market: Jakarta Automated Transaction System Next Generation**

Rico Nur Ilham, Arliansyah, Reza Juanda, Muammar Khaddafi, Khairil Anwar, Faculty of Economics and Business, Universitas Malikussaleh, Blang Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia

Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**9:00 – 10:45 pm, THURSDAY**

**Design and Analysis**

**Room 8 Virtual**

Session Chair: Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia

**ID 123 Standard Model Baby Incubator Product Development with Quality Function Deployment (QFD) Method and Simulation Application**

Waluyo Prasetyo, Rina Sri Wulandari, Untung Usada, Agus Rachmad Purnama, Muhammad Mansur Yafi, Achmad Fauzi Alfaris, Industrial Engineering Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo, Indonesia

**ID 064 A Study of m-Business Research Using Bibliometric Review**

Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

Mega Firdaus, Institute for Research and Community Services, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

Etsa Astridya Setiyati, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

Ayu Munjidah, Elementary Education Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

Muhammad Syamsul Fauz, Master of Management Department, Universitas Hayam Wuruk Perbanas, Surabaya 60296, Indonesia

**ID 446 Effectiveness of Gamification Strategy to Increasing Shopee's Customer Loyalty In Shopee's Marketing Public Relations**

Benedictus Dicky I., Public Relations Department, Faculty of Economics & Communication Bina Nusantara University Jakarta, Indonesia 11480

Gabriella Sagita Putri, Public Relations Department, Faculty of Economics & Communication Bina Nusantara University Jakarta, Indonesia 11480

Galuh Ayu Savitri, Public Relations Department, Faculty of Economics & Communication Bina Nusantara University Jakarta, Indonesia 11480

Adhi Murti Citra Amalia, Public Relations Department, Faculty of Economics & Communication Bina Nusantara University Jakarta, Indonesia 11480

**ID 445 Supply Chain Risk Mitigation with Supply Risk Management approach**

Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia

Bahtiar H. Simamora, Department of Management, Binus Business School, Bina Nusantara University Jakarta, Indonesia

Vikas Kumar, Bristol Business School, University of the West of England, Bristol, BS16 1QY, UK

**ID 451 Preventive Maintenance Modeling on Die Casting Machines with Information Systems**

Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia

Bahtiar H. Simamora, Department of Management, Binus Business School, Bina Nusantara University Jakarta, Indonesia

Vikas Kumar, Bristol Business School, University of the West of England, Bristol, BS16 1QY, UK

**ID 103 Systematic Literature Review on Managing the Barriers of Industry 4.0 Implementation in Sri Lankan Manufacturing Setting**

Lahiru Vimukthi, Dr. Amila Withanarachchi and Dr. Suren Peter, Department of Industrial Management, University of Kelaniya, Dalugama, Kelaniya, Sri Lanka Service Systems and Management:

**ID 299 Online Food Delivery (OFD) apps: What do the customers look at?**

Nurul Najih Zolkiffli, Department of Production and Operation Management, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, 86400, Batu Pahat, Johor, Malaysia

Rohaizan Ramlan, Chan Shiau Wei, Centre of Research on Service and Operations Management (CRSOM), Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, 86400, Batu Pahat, Johor, Malaysia

**ID 655 A Study of Imposition of Restrictions on Community Activities In Indonesia: Public Sentiment Analysis on Twitter Media**

Diryo Suparto, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu 21030 Kuala Nerus, Terengganu, Malaysia

**ID 656 Exploring the Community Involvement in Smart City through a Co-creation Approach in Indonesia**

Imam Yudhi Prastya, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 657 The Implementation of Clean Water Resources Development Policy: A Case Study of Atambua, Belu Regency, Indonesia**

Marialaeta Lidvina Phou Iki Bere Mau, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 691 A Study of Special Autonomy Fund Management of Papua Province, Indonesia: A Good Governance Perspective**

Luth, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 692 Literary and Historical Notes of Pennsylvania Colony: A Model of Multicultural Society**

Nuriadi and Eka Fitriana, Faculty of Education, Universitas Mataram, Indonesia  
 Rico Nur Ilham, Faculty of Economics and Business, Universitas Malikussaleh, Blang Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**9:00 – 10:45 pm, THURSDAY****Sustainability****Room 9 Virtual**

Session Chair: Chanika Hansani, Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka

**ID 442 Economic Growth, Information Technology, and Bribery Incidence**

Wilson Rajagukguk, Faculty of Economics and Business, Universitas Kristen Indonesia, Jl. Mayjen Sutojo No.2, Cawang, Jakarta 13630, Indonesia  
 John Tampil Purba, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia  
 Sidik Budiono, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia

**ID 516 A Review of Engineering Education Study in Indonesia**

Elsa Rosyidah, Environmental Engineering Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
 Nuzula Firdausi, English Language Education Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia  
 Achmad Wahyudi and Machfudzil Asror, Institute for Research and Community Services, Universitas Nahdlatul Ulama Sidoarjo  
 Sidoarjo 61218, Indonesia  
 Muh. Aris Izzudin, Elementary Education Teacher Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

**ID 264 Characterization of the assessment of university education learning in times of COVID-19 based on a systemic approach**

Carlos Oquelize, Silvia Campos, Robert Castro, Demetrio Mandujano, Mario Chauca, Engineering Faculty, Ricardo Palma University, Av. Alfredo Benavides 5440, Santiago de Surco 15039, Perú

**ID 306 How Good or Bad is the Prediction of Black-Box COVID-19 Models After One Year Has Lapped?**

Hennie Husniah, Department of Industrial Engineering, Langlangbuana University, Bandung, 40116, INDONESIA  
 Asep K. Supriatna, Department of Mathematics, Padjadjaran University, Jatinangor, 45363, INDONESIA

**ID 296 Prehistoric Park Tourism Object Leang-leang Kabupaten Maros as a Historical Tourist Destination**

Ismail Suardi Wekke, Institut Agama Islam Negeri (IAIN) Sorong, Indonesia, Asosiasi Dosen Insan Cita, Indonesia  
 The Jusuf Kalla Research Center for Cultural Studies, Universitas Muslim Indonesia  
 Muhammad Makbul, Institut Sains dan teknologi An-Nuriyah Makassar, Indonesia  
 Amen Rais, Institut Sains dan teknologi An-Nuriyah Makassar, Indonesia  
 Zulkfli Makmur, Sekolah Tinggi Agama Islam Darul Dakwah Wal Irsyad Kota Makassar, Indonesia  
 Sirojuddin Sirojuddin, Universitas Pendidikan Muhammadiyah Sorong, Indonesia

**ID 106 Factors Influencing Green Purchasing Behaviour of Consumers in Developing Countries**

Chanika Hansani and Amila Withanaarachchi, Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka

**ID 424 Recycling Model Selection based for express package base on AHP: A practical case of Yunnan University**

Kodchanitch Wannagoat, Wang Ruowen, Jirapat Wanitwattanakosol, College of Arts, Media and Technology, Chiang Mai University, Chiang Mai, Thailand

**ID 652 An Investigation of Open Career Promotion Policy Implementation in Indonesian National Police Institution**

Albertus Recky Robertho, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia, Terengganu 21030 Kuala Nerus, Terengganu, Malaysia



**ID 653 Implementation of the e-Kinerja System at the Department of Public Works and Spatial Planning, Cirebon Regency, Indonesia**  
Aos, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 654 A Study Collaborative Governance in Bengkulu City, Indonesia**  
Deni Triyanto, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 689 A Bluetooth Technology Controlled Wheelchair**  
Akande Saheed, Ter Kumater Peter and Mgbese Emmanuel, Department of Mechanical and Mechatronics Engineering, Afe Babalola University, Ado-Ekiti, Nigeria

**ID 690 A Study of Implementation of Special Autonomy Law: An Evidence from Post Peace Conflict of Aceh, Indonesia**  
Fadhil Ilhamy, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

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## November 5, 2021 (Friday) - Session: 8:00 – 9:30 am

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**6:00 – 8:00 am, FRIDAY**

**Case Studies**

**Room 5 Virtual**

Session Chair: Dr. Mohammed Ikhsan, Notoroma University, Indonesia

**ID 427 The Influence of Communication Psychology on the Character of Jasalindo Sport Swimming Athletes**  
AA. Mirah Krisnawati, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta, Indonesia  
Nur Kholis, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia

**ID 511 Communication Experience of The Neighborhood Chief in Covid 19 Handling in Kelurahan Pangkalan Mansyur Medan**  
Nadra Ideyani Vita, Nina Siti Salmaniah Siregar and Agnita Yolanda, Communication Science Department, Faculty of Political and Social Sciences, Universitas Medan Area, North Sumatera, Indonesia  
Feni Agus Bintang and Ridwan Nasution, Communication Science Department, Faculty of Political and Social Sciences, Universitas Islam Sumatera Utara, North Sumatera, Indonesia  
Indrayanti, Communication Science Department, Faculty of Political and Social Sciences, Universitas Hassanudin, Makassar, Indonesia  
Waridah, Governance Science Department, Faculty of Political and Social Sciences, Universitas Medan Area, Medan, North Sumatera, Indonesia

**ID 512 Strategies for Utilizing Instagram as a Digital Marketing Communication Media in Samudera Kuphi Medan Coffeeshop**  
Abdul Haris and Effiati Juliana Hasibuan, Communication Science Department, Faculty of Political and Social Sciences, Universitas Medan Area, North Sumatera, Indonesia  
Siti Hawa Lubis, Magister Psychology, Universitas Medan Area, North Sumatera, Indonesia  
Hasrat Effendi Samosir, Da'wah and Communication Faculty, Universitas Islam Negeri Sumatera Utara, Universitas Medan Area, North Sumatera, Indonesia

**ID 513 Policies, Roles and Relationships between Village Government and Community in Tourism Management in Situngkir Village, Pangururan District, Toba Samosir Regency, North Sumatera, Indonesia**  
Agung Suharyanto, Beby Masitho Batubara and Adam, Public Administration Study Program, Faculty of Social and Political Sciences, Universitas Medan Area, Indonesia  
Armansyah Matondang & Syafruddin Ritonga, Communication Science Study Program, Faculty of Social and Political Sciences, Universitas Medan Area, North Sumatera, Indonesia  
M. Citra Ramadhan & Anggreni Atmei Lubis, Faculty of Law, Universitas Medan Area, North Sumatera, Indonesia

**ID 514 How Media Sees the Brawl Between Residents in Belawan, North Sumatra, Indonesia (Case Study)**  
Dedi Sahputra & Rehia Isabella Karenina Barus, Communication Science Study Program, Faculty of Social and Political Sciences, Universitas Medan Area, North Sumatera, Indonesia  
Bahrum Jamil, Indra Muda and Nina Angelia, Public Administration Study Program, Faculty of Social and Political Sciences, Universitas Medan Area, North Sumatera, Indonesia  
Niarita Bukit, Universitas Sisingamangaraja XII Tapanuli, North Sumatera, Indonesia  
Agus Mulia, North Sumatra Province Language Center, Language Development and Development Agency. Ministry of Education, Culture, Research and Technology, North Sumatera, Indonesia

**ID 316 The Role of Traditional Institution (Keujreun Blang) in Realizing the Agricultural Industrialization in Nagan Raya District, Aceh Province, Indonesia**  
Nellis Mardhiah, Afrizal Tjoetra, Nodi Marefanda, Faculty of Social and Political Sciences, Universitas Teuku Umar, Ujong Tanoh Darat, Meureubo, West Aceh, Aceh 23681, Indonesia

Jumadil Saputra and Zikri Muhammad, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 192 Measuring the Risk Level of Employees for COVID-19: A Case in Government Sector**

Jerome Liwanag, Wajid Mariño, Anthony Sanchez, Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapua University, Muralla St., Intramuros, Manila,

**6:00 – 8:00 am, FRIDAY**

**Case Studies**

**Room 6 Virtual**

Session Chair: Ramy M. Khalifa, École Polytechnique de Montréal, Montréal, Québec, Canada

**ID 203 Quality 4.0: Entity Relationship Model for inspection and repair processes in Aerospace domain**

Ramy M. Khalifa, Department of Mathematics and Industrial Engineering, École Polytechnique de Montréal, Montréal, Québec, Canada  
Soumaya Yacout, Department of Mathematics and Industrial Engineering, École Polytechnique de Montréal, Montréal, Québec, Canada  
Samuel Bassetto, Department of Mathematics and Industrial Engineering, École Polytechnique de Montréal, Montréal, Québec, Canada

**ID 492 Facial Recognition System for Access Control through the Application of Convolutional Neural Networks**

Edison Vasquez and Monica Karel Huerta, Grupo de Telecomunicaciones GITEL, Universidad Politecnica Salesiana, Cuenca, Ecuador  
Roger Clotet Martinez, Astronomy, Big Data and Computing Science (ABACO), Valencian International University (VIU), Valencia, Spain  
José-Ignacio Castillo-Velázquez, ADVNETLAB, Telecommunications Engineering Department, Autonomous University of Mexico City  
Mexico City, Mexico

**ID 134 Digital Competencies of University Teachers in Universities in the Times of Covid-19, Cusco-Perú, 2020**

Elena Sonia Paula Espinoza Ríos, Felipe Néstor Gutarra Meza, Miriam Ingrid Espinoza Vilca Escuela Académico Profesional de Sistemas e Informática, Universidad Continental, Av. San Carlos 1980, Urb. San Antonio, Huancayo, Perú  
Vilma Canahuire Montufar, Escuela Profesional de Ciencias Administrativas, Universidad Nacional de San Antonio Abad del Cusco, Cusco, Perú

**ID 589 Control Of Rebar Waste Rate Using Building Information Modelling: A Case Study Of Suspended Road Structure**

Ryan Faza Prasetyo<sup>1</sup>, Darmawan Pontan<sup>2</sup>, 1,2 Universitas Trisakti, Jl. Kyai Tapa No.1, Jakarta Barat, DKI Jakarta, Indonesia

**ID 579 Crisis Management Covid-19 of Indonesian Government: Framing the News on Online Media**

Euis Komalawati<sup>1</sup>, Muhammad Affan<sup>2</sup>, Alfirahmi<sup>3</sup>, Jhulianfika Irianda<sup>4</sup>, Retno Ekasari<sup>5</sup>, Department of Communication Management  
Stiami Institute of Social Sciences and Management, Jakarta, Indonesia

**ID 590 The Determinants of Electronic Medical Record Satisfaction: Communication Styles, Computer Efficacy and Competency**

Erwin Pramastya Sabatini, Reswanda, Joko Suyono, Narotama University, Surabaya, Indonesia  
Damarsari Ratnasahara Elisabeth, STIE Mahardhika Surabaya, Surabaya, Indonesia  
Sukaris, University of Muhammadiyah Gresik

**ID 591 Container Operation and Distribution Costs on The Work Productivity Terminal on Domestic Containers**

Nugroho Dwi Priyohadi, Mudayat, Dian Arisanti, Agung Prasetyo, Sekolah Tinggi Ilmu Administrasi dan Manajemen Kepelabuhan (STIAMAK)  
Barunawati Surabaya, Indonesia

**6:00 – 8:00 am, FRIDAY**

**Innovation**

**Room 7 Virtual**

Session Chair: Edi Natanael Tarigan, I-GAN SOLUTIONS LTD, Auckland, New Zealand

**ID 143 Design methods and challenges of open innovation: collaborative and multidisciplinary processes.**

Felipe Torres Benoni, Civil Engineering Department, University of Santiago, Ave. Libertador Bernardo O'Higgins 3363, Santiago, Chile  
Roberto Duran Novoa, Engineering Design Department, Federico Santa Maria Technical University, Ave. Vicuña Mackenna 3939, Santiago, Chile

**ID 191 Targeted key indicators for enhancing national innovation performance**

Siham HAMIDI, Abdelaziz BERRADO, Equipe AMIPS- Ecole Mohammadia d'Ingénieurs, Mohamed V University, Avenue Ibn Sina, BP765, Agdal, Rabat, Morocco

**ID 260 Targeted key indicators for enhancing national innovation performance**

Siham HAMIDI, Abdelaziz BERRADO, Equipe AMIPS - Ecole Mohammadia d'Ingénieurs, Mohamed V University, Avenue Ibn Sina, BP765, Agdal, Rabat, Morocco

**ID 248 Design and Fabrication of a Human-Powered Vacuum System for Milking Carabaos and Cows**

Ron Paulo D. Cueto, Chris Anthony B. Javier, Daniel A. Pangilinan, Joshua H. Santos, Isla F. Igmedio, Jr.  
School of Mechanical and Manufacturing Engineering, Mapua University, Muralla St., Intramuros, Manila, Philippines 1002  
Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines

**ID 026 Diffusion of Facilities Management in an Emerging Market: Case of Sri Lanka**

Himal Suranga Jayasena, Department of Building Economics, University of Moratuwa, Moratuwa, Sri Lanka  
Gowsiga Mahendrarajah, Department of Building Economics, University of Moratuwa, Moratuwa, Sri Lanka

**ID 107 Determinant Factors Affecting the Innovation within the Organization in a Remote Working Environment**

A.A.Y.V. Perera, Bachelor of Science in Management and Information Technology, Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka  
Amila Withanarachchi, Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka

**ID 575 Correlation of Citizenship and Physical Disabilities in the context of Indonesia and New Zealand, especially in the Provision of Public Amenities**

Nuah P. Tarigan, Character Building Development Center, Computer Science Department, School of Computer Science, Bina Nusantara University Jakarta, Indonesia and Universitas Pelita Harapan, Doctor of Research in Management in Education Leadership program, Jakarta 12930.  
Edi Natanael Tarigan, I-GAN SOLUTIONS LTD, Auckland, New Zealand

**ID 576 Econometric Panel Analysis of Transportation Sub Sector companies: Firm-specific factors Approach**

Firly Irfhamni, Ulfyah Mazidatun Ni'mah, and Riyan Sisiawan Putra, Department of Management, Universitas Nahdlatul Ulama Surabaya Surabaya, Indonesia

**6:00 – 8:00 am, FRIDAY**

**IoT**

**Room 8 Virtual**

Session Chair: Maxwell Schoeman and Marné de Vries, Department of Industrial Engineering, University of Pretoria, South Africa

**ID 310 Traffic Light Status Detection using APV Method**

Moh Noor Al-Azam<sup>1</sup>, Cahyo Darujati<sup>1</sup>, Engineering and Computer Science Faculty, Narotama University, Surabaya, Jawa Timur, 60117, Indonesia  
Sri Wiwoho Mudjanarko, <sup>2</sup>, Civil Engineering Faculty, Narotama University, Surabaya, Jawa Timur, 60117, Indonesia

**ID 070 Smart Irrigation Scheduling Algorithms and Deployment Scenarios: Challenges and Recommendations for Farming in the Sub-Saharan Africa**

Supreme Ayewoh Okoh, Suleiman Zubairu, Bala Alhaji Salihi and Elizabeth N. Onwuka, Department of Telecommunication Engineering Federal University of Technology, Minna, Nigeria

**ID 212 IoT enabled indoor air quality monitoring system for sustainable health management in an industry laboratory, a case study**

Nicolas Ferreira, Mechatronics Engineering Department, Universidad del Cono Sur de las Américas, Asunción, PARAGUAY  
Matias Sanchez, Electronics Engineering Department, Universidad Politécnica y Artística del Paraguay, Asunción, PARAGUAY  
Walter López, Industrial Safety Management, PETROPAR, Villa Elisa, PARAGUAY

**ID 414 A Collaborative IoT Design Approach**

Maxwell Schoeman and Marné de Vries, Department of Industrial Engineering, University of Pretoria, South Africa

**ID 582 Digital Marketing Tourism West Sumatra: Gordon Ramsay's Youtube Video Semiotics Analysis**

Euis Komalawati, Heni Pridia Rukmini Sari, Lila Muliani, Inti Krisnawati, Department of Communication Management, Department of Hospitality & Tourism Stiarni Institute of Social Sciences and management, Jakarta, Indonesia

**ID 597 E-Learning Platform to Assess Students' Performance in Industrial Revolution 4.0**

Ana Christanti, Muawwinatul Laili, Evi Mahsunah and Masyitah Noviyanti, English Language Education Department, Universitas Nahdlatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia

**ID 570 The Mediating Role of Knowledge Sharing in Relationship Between IT Application Usage and End-User Focus on Employee Performance**

Hendry Eka Prastiya, Hermien Tridayanti, Abdul Hamid, Nasyik Ifadah, Joko Suyono, Narotama University, Surabaya, Indonesia

**ID 599 The Analysis Of Sap Project System Module's Implementation On Data Accuracy As Net Benefit For Infrastructure Projects**

Achmad Jofimar Ali, Civil Engineering Master Program, Faculty of Civil Engineering and Planning, Trisakti University, Jakarta, Indonesia  
Jane Sekarsari, Civil Engineering Master Program, Faculty of Civil Engineering and Planning, Trisakti University, Jakarta, Indonesia

**6:00 – 8:00 am, FRIDAY**

**Technical Session**

**Room 9 Virtual**

Session Chair: Joko Suyono, Narotama University, Surabaya Indonesia

**ID 353 Preparation and characteristics of synthesized hydroxyapatite from bovine bones and by co-precipitation method**

Saida Bouyegh, Samira Tili, Kotbia Labiod and Mohamed Hassani, Research Center in Industrial Technologies CRTI, P.O. Box 64, Cheraga 16014 Algiers, Algeria  
Mohamed Grimet and Oussama Bensalem, Chemistry Department, Badji Mokhtar -Annaba University

**ID 271 Statistical Analysis of the Relationship between the Sintering Process and Magnetic Energy on the Improvement of the Magnetic Properties of the Permanent Magnet BaFe<sub>12</sub>O<sub>19</sub>**

Perak Samosir and Dwita Suastiyanti, Study Program on Mechanical Engineering, Institut Teknologi Indonesia, Jl.Raya Puspiptek Serpong Kota Tangerang Selatan 15314  
Wilson Rajagukguk, Faculty of Economics and Business, Universitas Kristen Indonesia, Jl. Mayjen Sutojo No.2, Cawang, Jakarta 13630, Indonesia  
John Tampil Purba and Sidik Budiono, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia

**ID 436 Development of Vegetable Oil-based Nano-lubricants using MMT Nanoparticles as Lubricant Additives**

MD Mashfiqur Rahman, Md Abu Sayeed Biswas, and Javier A. Ortega, Department of Mechanical Engineering, The University of Texas Rio Grande Valley, Edinburg, TX 78539, USA  
Laura Peña-Parás and Demófilo Maldonado-Cortés, Engineering Department, Universidad de Monterrey, San Pedro Garza García, N. L., México

**ID 437 Characterization of vegetable oil-based lubricants with Halloysite Nanotubes as lubricant additives and their tribological performance**

Md Abu Sayeed Biswas, MD Mashfiqur Rahman, and Javier A. Ortega, Department of Mechanical Engineering, The University of Texas Rio Grande Valley, Edinburg, TX 78539, USA  
Laura Peña-Parás and Demófilo Maldonado-Cortés, Engineering Department, Universidad de Monterrey, San Pedro Garza García, N. L., México

**ID 592 Effect of Operator Performance and Effectiveness Unloading Equipment on Container Handling at Terminal on Domestic Containers**

Nur Widyawati, Juli Prastyorini, Anggit Julio, Sekolah Tinggi Ilmu Administrasi dan Manajemen Kepelabuhan (STIAMAK) Barunawati Surabaya, Indonesia  
Joko Suyono, Narotama University, Surabaya, Indonesia

**ID 593 Effectiveness of HMC Equipment, Workload and Work Stress on Work Productivity of Jamrud Terminal Surabaya Employees**

Nugroho Dwi Priyohadi, Soedarmanto, Vixtor Mada Hardani, Sekolah Tinggi Ilmu Administrasi dan Manajemen Kepelabuhan (STIAMAK) Barunawati Surabaya, Indonesia  
Joko Suyono, Narotama University, Surabaya Indonesia

**ID 555 Exploration of Medicinal Plants in Pamekasan District: Ethnobotany Study in Herbal Medicine to Prevent Symptoms of Tuberculosis Infection**

Khoirin Maghfiroh, Department of Biology, Faculty of Mathematics and Natural Sciences, Brawijaya University, Department of Food Science and Technology, Faculty of Agriculture, Yudharta University  
Jati Batoro, Sri Widyarti and Sutiman Bambang Sumitro, Department of Biology, Faculty of Mathematics and Natural Sciences, Brawijaya University

**ID 594 Quality Improvement of Indonesian Migrant Worker Entrepreneurs in Taiwan during Covid-19 Pandemic**

Beni Dwi Komara, Sukaris, Aries Kurniawan, Indro Kirono, and Nur Cahyadi, Faculty of Economics and Business, Universitas Muhammadiyah Gresik, Gresik Regency, East Java, Indonesia

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## November 5, 2021 (Friday) - Session: 8:15 am – 1:00 pm - Ballroom

### Keynote Speakers – Day 3

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8:15 - 8:30 am Welcome Address:

Tecnológico de Monterrey and  
RELIEVE (Latin American Network of Energy Efficiency in Vehicles)

8:30 - 9:15 am Keynote XI:

**Prof. José Benito Flores Juárez**

Director de la División de Ingeniería y Tecnologías  
Universidad De Monterrey, Mexico  
Past President of American Society for Quality (ASQ)

9:15 - 10:00 am Keynote XII:

**Dr. Josep Miquel Piqué Huerta**

HVAC at Carrier, President of Technova Barcelona – La Salle Innovation Park  
Manager of Internationalization and Innovation – La Salle URL, Barcelona, Spain

10:00 – 10:15 am Break

10:15 - 11:00 am Keynote XIII:

**Marco Antonio Vildoso Flores**

Secretary for Advance FIT Engineering Studies  
San Sebastian University, Santiago, Chile

11:00 - 11:45 am Keynote XIV:

**Dra. Natalia Navarrete**

Chassis Technologies for EVs - Manager – Commercial Vehicles

11:45 am - 12:30 am Keynote XV:



**Frank Nagorschel**  
 Director of Talent Solutions  
 Crystal System Group  
 Limassol, Cyprus

12:30 - 1:00 pm Lunch Break

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## November 5, 2021 (Friday) - Session: 1:00 – 2:45 pm

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**1:00 – 2:45 pm, FRIDAY**

**Plenary Session - V**

**Ballroom 1a**

Session Chair: Gaby Mtz

1:00 - 1:30 pm, Friday, November 5 - Plenary XIII

Dr. Laura Peña Parás  
 Professor and Researcher, Engineering Department  
 University of Monterrey (UEM), Monterrey, Mexico

Topic: Nanolubricants for Metalworking Applications

1:40 - 2:10 pm, Friday, November 5 - Plenary XIV

Ing José Luis González Mona  
 Software Quality Assurance Lead  
 Common Securitization Solutions

Software Quality Assurance in FinTech, current trends and what's coming

2:15 - 2:45 pm, Friday, November 5 - Plenary XV

Dr. Jorge Lozoya  
 Professor, Engineering and Science School  
 Core Researcher, Automotive Consortium for Cyberphysical Systems  
 School of Engineering and Sciences  
 Tecnológico de Monterrey

Conscious Technologies for Smart Communities: Case

**1:00 – 2:45 pm, FRIDAY**

**Panel 5**

**Ballroom 1b**

## Diversity and Inclusion Panel sponsored by Ford Motor Company

Panel Chair

Professor Donald M. Reimer  
 President, The Small Business Strategy Group, Detroit, Michigan, USA  
 Adjunct Faculty – A. Leon Linton Department of Mechanical Engineering, Lawrence Tech, Southfield, Michigan, USA

Panel Speaker I

María Elena Huertas  
 Environmental Engineer  
 Universidad de los Andes  
 Bogota, Colombia

Panel Speaker II

Dr. Ximena Córdova Vallejo  
 Profesora, Colegio de Ciencias e Ingenierías, Politécnico  
 Universidad San Francisco de Quito, Ecuador

Panel Speaker III

Dr. Asaad Makki  
 EESE Chief Engineer  
 Ford Motor Company  
 Dearborn, Michigan, United States

## Panel Speaker IV

Daniel Hodges  
President  
Meknology LLC  
Novi, Michigan, USA

## Panel Speaker V

From Mexico

**1:00 – 2:45 pm, FRIDAY****Engineering Education****Breakout Room 1 - Onsite**

Session Chair: Dr. Santiago Cruz, Mechanical and Electrical Engineering, Universidad de Monterrey

**ID 095 The Toyota Production System Principles and Behaviors in a Higher Education Institution Classroom**

Fernando Gonzalez-Aleu, Department of Computer Systems and Industrial Engineering, Universidad de Monterrey, San Pedro Garza García, NL, 66238, México

Jesus Vazquez-Hernandez, Innovation and Strategy, Advanced Value Chain Institute, San Pedro Garza García, NL., 66250, Mexico

Mario Alberto Del Valle Velez, Vicepresidente, Asociación de Exbecarios de Mexico en Japón, Miguel Hidalgo, Ciudad de México, Mexico

**ID 169 Measurement of the adaptability of practical learning units to the non-school modality.**

Arlthe Yari Aguilar Villarreal, Cinthya Rocío Ramos Jiménez, Héctor Fabián Dávila García, Enrique Estanislao Ortiz Fuentes

Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Ave. Universidad S/N Cd. Universitaria, San Nicolás de los Garza Nuevo León, Mexico

**ID 045 Analysis of the Adoption of EVs and Charging Infrastructure in Mexico**

Adrian Ramirez-Nafarrate, Mitchell Ruiz Martinez, and Juan C. Grayeb Pereira, Facultad de Ciencias Económicas y Empresariales, Universidad Panamericana, Zapopan, Jalisco 45010, Mexico

**1:00 – 2:45 pm, FRIDAY****Business Management****Breakout Room 2 - Onsite**

Session Chair: Fabricio Fernández, Director of Engineering Management Program, Universidad de Monterrey

**ID 085 Net Promoter Score Scale Transformed into a Logit Model, a Full-service Restaurant Approach.**

Christian Reich López, María Mayela Terán Cázares, Jesús Fabián López Pérez, Mónica Blanco Jiménez, Universidad Autónoma de Nuevo León, Facultad de Contaduría Pública y Administración Av. Universidad S/N, Col. Ciudad Universitaria, San Nicolas de los Garza, Nuevo León, México.

**ID 091 The Soft Skills as a Drivers of Customer Service in the Automobile Dealers**

Roxana Dalila Escamilla Vielma, Adriana Segovia-Romo, Jesús Fabián López, Faculty of Public Accounting and Administration- FACPYA, Autonomous University of Nuevo León – UANL, Av. Universidad S/N col. Ciudad Universitaria, San Nicolas de los Garza, Nuevo León, México.

**ID 096 Impact of organizational culture in shaping organizational citizenship behavior: case of five-year training for suppliers of international steel companies**

María Mayela Terán Cázares, Investigation- Professor, Facultad De Contaduría Pública y Administración, Universidad Autónoma De Nuevo León, Av. Universidad s/n Cd. Universidad C.P. 66455. San Nicolás de los Garza, Nuevo León, México

Mónica Blanco Jiménez, Investigation- Professor, Facultad De Contaduría Pública y Administración, Universidad Autónoma De Nuevo León, Av. Universidad s/n Cd. Universidad C.P. 66455. San Nicolás de los Garza, Nuevo León, México

Blanca Nelly Rodríguez Garza, Professor, Facultad De Contaduría Pública y Administración, Universidad Autónoma De Nuevo León, Av. Universidad s/n Cd. Universidad C.P. 66455. San Nicolás de los Garza, Nuevo León, México

Ivon Abigail González Garza, Student, Facultad De Contaduría Pública y Administración, Universidad Autónoma De Nuevo León, Av. Universidad s/n Cd. Universidad C.P. 66455. San Nicolás de los Garza, Nuevo León, México

**ID 151 The Factors that Impact the Internationalization of the Artisanal SMES of the Citrus Region of the State of Nuevo León (Theoretical Framework)**

Yamileth Aguilar García and Diana Maricela Vasquez Treviño, Facultad de Contaduría Pública y Administración, Universidad Autónoma de Nuevo León, Ciudad Universitaria, San Nicolás de los Garza, NL.

Mónica Blanco Jiménez, Facultad de Contaduría Pública y Administración, Universidad Autónoma de Nuevo León, Ciudad Universitaria, San Nicolás de los Garza, NL.

Juan Patricio Galindo Mora, Facultad de Contaduría Pública y Administración, Universidad Autónoma de Nuevo León, Ciudad Universitaria, San Nicolás de los Garza, NL

Yamileth Aguilar García, Diana Maricela Vásquez Treviño, Mónica Blanco Jiménez, Juan Patricio Galindo Mora, Facultad de Contaduría Pública y Administración, Universidad Autónoma de Nuevo León, Ciudad Universitaria, San Nicolás de los Garza, NL.

**ID 213 Processed Food Imports that Improve Company Competitiveness in Emerging Countries**

Monica Blanco-Jimenez, Angelica Tejeda-Villanueva, Diana M. Vasquez-Treviño, Facultad de Contaduría Pública y Administración, Universidad Autónoma de Nuevo León, San Nicolas de los Garza, Nuevo León, México

**ID 510 Impact of the Country-of-Origin Image on the Purchase Intention of Foreign Products in Mexican Consumers During the COVID-19 Pandemic**

Alexis Jazmín Morán-Huertas, Facultad de Contaduría Pública y Administración, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, Nuevo León, México

**1:00 – 2:45 pm, FRIDAY****Innovation****Breakout Room 3 - Onsite**

Session Chair: José Zubiaga, Director of Industrial and Systems Engineering Management Program, Universidad de Monterrey

**ID 008 Walnut oil extraction methodology to inhibit the polyphenol oxidase enzyme**

Roberto Montemayor Rojas Monterrey Nuevo Leon Mexico

**ID 049 Familiness from the approach of Participation, Essence and Identity in Family Businesses of two municipalities in the Northern Zone of the State of Mexico: An Empirical Approach**

Sayde Suárez Odilón, Universidad Autónoma del Estado de México, Centro Universitario Atlacomulco  
Zugaide Escamilla Salazar, Universidad Autónoma del Estado de México, Centro Universitario Atlacomulco  
Carlos Robles Acosta, Universidad Autónoma del Estado de México, Centro Universitario Ecatepec

**ID 219 Calcium And Sodium Alginate Concentrations For Reverse Spherification**

Gerardo Espinosa Garza, UDEM Monterrey Nuevo Leon Mexico

**ID 220 Process To Delay Hypalon Wastage**

Gerardo Espinosa Garza, UDEM Monterrey Nuevo Leon Mexico

**ID 221 Wine Production With Frozen Grapes**

Gerardo Espinosa Garza, UDEM Monterrey Nuevo Leon Mexico

**ID 365 Life cycle assessment in the wine industry – a Bibliometric analysis**

Adrián Salvador Morales García, Jorge Luis García Alcaraz and Yashar Aryanfar, Department of Electric Engineering and Computers Sciences  
Autonomous University of Ciudad Juarez, Ciudad Juárez 32310, Mexico  
José Roberto Díaz Reza, Department of Industrial Engineering, Tecnológico Nacional de México/I.T. Ciudad Juárez, Ciudad Juarez 32500, Mexico  
Ari Happonen, LUT School of Engineering Science, LUT University, Lappeenranta 53850, Finland  
Julio Blanco Fernández, Department of Mechanical Engineering, University of La Rioja, Logroño, 26006, Spain

**1:00 – 2:45 pm, FRIDAY**

**Global Supply Chain & Logistics I**

**Room 5 Virtual**

Session Chair: Ana Bertha Flores, Computer Science and Industria Engineering. Universidad de Monterrey

1:00 – 1:20 (Friday, November 5)

Sadique Salim, Design Thinking Expert, CMBB, PMP  
Vice President, Bangladesh  
Dr. Mikel J Harry Six Sigma Management Institute Inc., Dhaka, Bangladesh

1:20 – 1:40 (Friday, November 5)

Prof. Prabhat Mittal  
Professor, Department of Commerce & Management  
Satyawati College (Eve.)  
University of Delhi, India

1:40 – 2:00 (Friday, November 5)

Dr. Diego Alberto Oliva  
Associate Professor  
Universidad de Guadalajara, CUCEI  
Guadalajara y alrededores, México

2:00 – 2:20 (Friday, November 5)

Dr. Ahm Shamsuzzoha  
Tenure Track Professor  
University of Vaasa, Finland

2:20 – 2:40 (Friday, November 5)

Dr. Asela Kulatunga  
Senior Lecturer, Department of Manufacturing & Industrial Engineering  
Faculty of Engineering  
University of Peradeniya, Sri Lanka

**1:00 – 2:45 pm, FRIDAY**

**Data Analytics**

**Room 6 Virtual**

Session Chair: Xavier Cantú, Physics and Mathematics Department. Universidad de Monterrey

**ID 164 Searching for Key Topics around Artificial Intelligence and Machine Learning as a Process Optimization Driver**

Federico Walas Mateo, Universidad Nacional Arturo Jauretche, Buenos Aires, Argentina  
Andres Redchuk, Universidad Nacional de Lomas de Zamora. Facultad de Ingeniería. Buenos Aires, Argentina.  
ETSII. Universidad Rey Juan Carlos. Madrid. España

**ID 300 Material Flows Prediction for Dynamic Facility Layout Problems via Machine Learning Algorithms**

Adem ERIK, Çukurova University, Seyhan, Adana, Turkey

**ID 419 Dimensionality Reduction and Text Mining for Smart Content Filtering of an Online Health Forum**

Reinaldo Sanchez-Arias, Roberto Batista, Levi C. Nicklas, Department of Data Science and Business Analytics, Florida Polytechnic University, Lakeland, FL 33805, USA

Peter Akioyamen, The School of Mathematical and Statistical Sciences, Western University, Ontario, Canada

**ID 226 Behavioristic Segmentation for Supermarket Chains Using Unsupervised Machine Learning Algorithms**

Carlos Hernández, Galo Paiva, Departamento de Ingeniería Industrial y Sistemas  
Universidad de La Frontera, Temuco, Chile

**ID 206 How can BPM and Lean practices accelerate digital transformation? Evidence based on a practical case**

Mariana Carvalho, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, Aveiro, Portugal  
Leonor Teixeira, Institute of Electronics and Informatics Engineering of Aveiro (IEETA), Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro 3810-193, Aveiro, Portugal

**ID 129 Determinant Factors for the Sustainability of SMEs in the Northern Mexican Restaurant Sector: A Documentary Perspective.**

Evelin Anahí Torres-Torres; Alfonso López-Lira Arjona; César Eduardo Perales Martínez, Ciencias económico y Administrativo, Facultad de Contaduría Pública y Administración, Av. Universidad s/n Cd. Universidad, San Nicolás de los Garza, Nuevo León, México

**1:00 – 2:45 pm, FRIDAY****Business Management****Room 7 Virtual**

Session Chair: Andrés Acero, Civil and Management Engineering. Universidad de Monterrey

**ID 523 Monitoring Multi-Attribute Characteristics using a Combined Scheme of np and EWMA Charts**

Farah Alyassi a, Salah Haridy b, Mohammad Shamsuzzaman c, Imad Alsyouf d, Department of Industrial Engineering and Engineering Management, University of Sharjah, Sharjah 27272, United Arab Emirates

**ID 546 Jidoka enhances unilateral e-marketing and predicts e-stock although uncertainty modus operandi case**

Ahmed M. Abed, Dept. of Industrial Engineering, Zagazig University, Egypt  
Tamer S. Gaafar, Dept. of computer and System Engineering, Zagazig University, Egypt

**ID 548 An Understanding of the Food Chain System in Malaysia: A Mini-Review Approach**

Siti Aishah Mohd Zakuan, Latifah Abdul Ghani, Zikri Muhammad, Jumadil Saputra, Faculty of Business, Economics and Social Development  
Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 549 Recyclable Materials Flows in Municipal Solid Waste System in Terengganu: An Application of Material Flow Analysis**

Fatin Alias, Latifah Abdul Ghani, Rahaya Md Jamin, Siti Aisyah Saat, Zikri Muhammad, Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia  
Nora'aini Ali, Faculty of Ocean Engineering Technology and Informatics, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia

**ID 550 Social Impact of Small Seawater Desalination Plant of Local Community: A Social Life Cycle Assessment**

Ilyanni Syazira Nazaran, Latifah Abdul Ghani, Zikri Muhammad, Jumadil Saputra, Faculty of Business, Economic and Social Development  
Universiti Malaysia Terengganu, 21030, Kuala Nerus, Terengganu, Malaysia  
Nora'aini Ali, Faculty of Ocean Engineering Technology and Informatics, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia

**ID 551 Relationship of Working Capital Management and Leverage towards Firm Value: An Evidence from Indonesia Stock Exchange**

Rico Nur Ilham, Henny Irawati, Rany Gesta Putri Rais, Nurhasanah, Faculty of Economics and Business, Universitas Malikussaleh, Blang Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia  
Lakharis Inuzula, Faculty of Economics and Business, Universitas Islam Kebangsaan Indonesia, Bireun 24212 Aceh, Indonesia  
Irada Sinta, Faculty of Agriculture, Universitas Malikussaleh, Releut, Aceh Utara, 24355 Aceh, Indonesia  
Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia

**1:00 – 2:45 pm, FRIDAY****Decision Sciences****Room 8 Virtual**

Session Chair: Gloria Martínez. Computer Science and Industrial Engineering. Universidad de Monterrey

**ID 359 Decent Work and Gender Equality in Mexico**

Brenda Esmeralda Moreno-Garduño, Gabriela Guadalupe Escobedo-Guerrero, Georgette del Pilar Pavía-González, Antonio Uribe-Méndez, Victor Martin Maldonado-Benitez, ESCA Santo Tomás, Instituto Politécnico Nacional, Mexico City, Mexico

**ID 544 Comparison of SVM Algorithm and Neural Network with Feature Optimization Based on Genetic Algorithm in Determining Immunotherapy Success in Cancer Disease**

Yudi Ramdhani, Rizki Tri Prasetyo, Ryan Hidayat, Computer Science Program, Universitas Adhirajasa Reswara Sanjaya, Bandung, Indonesia  
Doni Purnama Alamsyah, Entrepreneurship Dept., BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

**ID 541 Decision Support System Application with Simple Additive Weighting**

Doni Purnama Alamsyah, and Leni Susanti, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
Yudi Ramdhani and Rizki Tri Prasetyo, Computer Science Program, Universitas Adhirajasa Reswara Sanjaya, Bandung, Indonesia

**ID 542 Decision Support System of Food and Beverage Franchise Business**

Doni Purnama Alamsyah, Bina Nusantara University, Bandung, West Java, Indonesia

**ID 543 The Evaluation of Acceptance Samsung Smart Switch Application as Data Sharing Media Using UTAUT**

Rizki Tri Prasetyo and Yudi Ramdhani, Computer Science Program, Universitas Adhirajasa Reswara Sanjaya, Bandung, Indonesia  
Doni Purnama Alamsyah, and Kurniadi, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia



# November 5, 2021 (Friday) - Session: 3:00 – 4:45 pm

**3:00 – 4:45 pm, FRIDAY****Plenary Session - VI****Ballroom 1a**

Session Chair: William

3:00 - 3:30 pm, Friday, November 5 - Plenary XVI

Fabiola Solorio  
 Director FP&A, Carrier HVAC, Fabiola Solorio  
 Director FP&A, Carrier HVAC HQ  
 Co-Chair, Women's Empowerment @Carrier  
 Charlotte, NC

Business in a changing environment

3:40 - 4:10 pm, Friday, November 5 - Plenary XVII

Lydia Gutierrez  
 President of Hacienda Mexican Foods  
 Detroit, Michigan

Promoting woman and entrepreneurship to achieve economic growth in an urban neighborhood

Kaustubh Kale  
 Industrial Engineer  
 Hacienda Mexican Foods  
 Detroit, Michigan

4:15 - 4:45 pm, Friday, November 5 - Plenary XVIII

Albes Rafael Urdaneta Urdaneta  
 Energy Manager  
 Ternium  
 Monterrey, Mexico

**3:00 – 4:45 pm, FRIDAY****Supply Chain Management****Breakout Room 1 - Onsite**

Session Chair: Dr. Bernardo Villarreal. Professor. Universidad de Monterrey

**ID 007 Factors Influencing Transport Productivity of a Freight Transport Company**

Felix Eduardo Bueno Pascual, José Luis Martínez Flores, Santiago Omar Caballero Morales, School of Logistics and Supply Chain Management  
 Universidad Popular Autónoma de Puebla, Avenida 9 Poniente 1712, C.P. 72410, Puebla, Puebla, México  
 Luis Alberto Barroso Moreno, Universidad de las Américas Puebla. Ex Hacienda Sta. Catarina Mártir S/N. San Andrés Cholula, Puebla. C.P. México

**ID 486 The Bullwhip Effect in the Northern States of Mexico: an Econometric and Sustainable Analysis in the Transport and Logistics Sector**

Fabricio Moreno-Baca, Patricia Cano-Olivos, Industrial & Logistics Faculty, Universidad Popular Autónoma del Estado de Puebla, 17 Sur 901, Barrio de Santiago, 72410, Puebla, Mexico

**ID 435 Proposal for the Implementation of Key Performance Indicators for a Warehouse. Case: Tracto Partes Diamante de Puebla S.A. de C.V.**

Maria Fernanda Barreto-Maceda, Diana Sánchez-Partida, Santiago Omar Caballero-Morales and Luis Cuatle-Gutierrez.  
 Faculty of Industrial Engineering and Logistics, Department in Logistics and Supply Chain Management, UPAEP University, 17 Sur 901, Barrio de Santiago, CP 72410 Puebla, México

**ID 379 Control and Continuous Improvement in the Picking Area**

Marco Antonio Lucero-Flores, Facultad Industrial y Logística. Departamento en Logística y Dirección de la cadena de suministro, Universidad Popular Autónoma del Estado de Puebla A.C., 17 Sur 901, Barrio de Santiago, Puebla, 72410, México  
 Diana Sánchez-Partida, Facultad Industrial y Logística. Departamento en Logística y Dirección de la cadena de suministro, Universidad Popular Autónoma del Estado de Puebla A.C., 17 Sur 901, Barrio de Santiago, Puebla, 72410, México  
 Patricia Cano-Olivos, Facultad Industrial y Logística. Departamento en Logística y Dirección de la cadena de suministro, Universidad Popular Autónoma del Estado de Puebla A.C., 17 Sur 901, Barrio de Santiago, Puebla, 72410, México  
 Luis Cuatle-Gutierrez, Facultad Industrial y Logística. Departamento en Logística y Dirección de la cadena de suministro, Universidad Popular Autónoma del Estado de Puebla A.C., 17 Sur 901, Barrio de Santiago, Puebla, 72410

**ID 301 Optimal Location of a Central Warehouse for a Retail Painting Company: Practical Case in Mexico**

Luis Antonio Guzmán-García, Diana Sánchez-Partida, José Luis Martínez-Flores and Patricia Cano-Olivos, Department of Logistics and Supply Chain Management, UPAEP University, 17 Sur 901, Barrio de Santiago, CP 72410 Puebla, Puebla, Mexico, Universidad Popular Autónoma del Estado de Puebla, Puebla, Puebla 72410, Mexico

**3:00 – 4:45 pm, FRIDAY****Data Analytics****Breakout Room 2 - Onsite**

Session Chair: Dr. José Daniel Morcillo. Civil and Management Engineering. Universidad de Monterrey

**ID 132 A proposal for deep learning model development for pyuria detection**

Sergio Eduardo Anaya Alvarez, Catalina de León Santos, Azael Jesus Cortes Capetillo, Jorge de J Lozoya-Santos, David Güemes-Castorena  
Department of science and manufacturing, Tecnológico de Monterrey, School of Engineering and Sciences, Monterrey, N.L. 64849, México

**ID 030 Statistical Analysis of Annealing Heat Treatment in a Drawn Wire Machine**

Francisco Antonio Perales Carballedo, UPAEP University, México  
José Luis Martínez-Flores, UPAEP University, México

**ID 141 Design of an Electronics Swapping System for Electric Guitars**

Helgi S. Waage-Delgadillo, Rafael González-Parra, Alba Covelo, Miguel A. Hernandez, Raúl Valdéz and Arturo Barba-Pingarrón, Surface Engineering Center (CENISA) - Engineering Faculty, National Autonomous University of Mexico, Circuito Exterior. Ciudad Universitaria. CDMX  
Jesús M. Dorador González, National School of Higher Studies - Engineering Faculty, National Autonomous University of Mexico, Juriquilla, Querétaro

**ID 130 An Instrument to Measure Work Stress on Mexican Academic Staff**

César Eduardo Perales Martínez, María Mayela Terán Cázares and Evelin Anahí Torres Torres  
Centro de Desarrollo Empresarial y Posgrado de FACPya, Universidad Autónoma de Nuevo León, Monterrey, México

**ID 545 Modification of the salmon dehydration process to obtain higher productivity in fatty acids: omega-3**

Arturo Anzaldúa, Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey, Nuevo Leon, Mexico

**3:00 – 4:45 pm, FRIDAY****Energy****Breakout Room 3 - Onsite**

Session Chair: Consuelo Cabello, Director of Computing Engineering Program, Universidad de Monterrey

**ID 131 Analysis of Building Construction in a Colombian Case from a Total Quality Management Perspective**

Julián David González Zapata, Bertha Viviana Ruales Guzmán, Lina Patricia Velasquez Mora, Department of Computer and Industrial Engineering  
Universidad Nacional de Colombia, Bogotá D.C., Colombia  
Laura Milena Hernández Castañeda, Department of Civil and Agricultural Engineering, Universidad Nacional de Colombia, Bogotá D.C., Colombia

**ID 162 Evaluation of an electric go-kart with lithium-ion and nickel-metal hydride batteries**

Gustavo Alvarez-Coello, ERGON - Automotive Engineering Research and Development Center, Universidad del Azuay, Cuenca, Ecuador  
Andrés Idrovo-Pauta, Daniel Cordero-Moreno, Efrén Fernández-Palomeque

**ID 138 Proposals to Strengthen the Implementation of Quality Management in Higher Education**

Catalina Torregrosa Morales, Bertha Viviana Ruales Guzmán, Brayan Camilo Vega Fuentes, Daniel Enrique Saavedra Castañeda, Systems and Industrial Engineering Department, Universidad Nacional de Colombia, Bogotá, Colombia

**ID 165 Performance and Emission Characteristics of Diesel-Biodiesel-Ethanol Blends in a Heavy-Duty Compression Ignition Engine at Simulated High Altitudes**

Julio C. Cuisano and Soín E. Puma, Mechanical Department of Engineering Faculty, Pontificia Universidad Católica del Perú, Lima, Perú

**ID 149 Real fuel consumption in the main logistic corridors of Colombia**

José I. Huertas and Oscar Serrano-Guevara, Energy and Climate Change Research Group, School of Engineering and Sciences, Tecnológico de Monterrey, Monterrey, Mexico  
Oscar Serrano-Guevaraa, Energy and Climate Change Research Group, School of Engineering and Sciences, Tecnológico de Monterrey, Monterrey, Mexico  
Jenny Díaz-Ramírez, Department of Engineering, Universidad de Monterrey, Monterrey, México and Connected Fleet Department, Michelin, Bogotá, Colombia  
Daniel Pratoc, Innovation department, Latin American Center for Innovation in Logistics – CLI – Logyca, Bogotá, Colombia  
Lina Tabaresd, Connected Fleet Department, Michelin, Bogotá, Colombia

**ID 528 Uwine Prueba**

Eduardo Guajardo, ITESM, Monterrey, Nuevo Leon, Mexico

**ID 333 Reciprocating sliding motion tribometer design**

Dr. Demófilo Maldonado Cortés, Dra. Laura Peña Parás, Mechanical and Electronics Department, University of Monterrey, Monterrey, México

**3:00 – 4:45 pm, FRIDAY****Global Supply Chain & Logistics II****Room 5 Virtual**

Session Chair: Brenda Villalobos, Physics and Mathematics Department. Universidad de Monterrey

3:00 – 3:20 (Friday, November 5)

Ignacio Laiton Poveda  
Docente Investigador  
Escuela Tecnológica Instituto Técnico Central  
Bogotá, Colombia

3:20 – 3:40 (Friday, November 5)

Robert Simonis  
Lean Expert and Consultant  
KCE Consulting LLC, Troy, Michigan, USA

Proposed title of talk: Creating Flow in Logistics: VMI warehouse to JIT delivery in Monterrey

3:40 – 4:00 (Friday, November 5)

Justin T. Smith  
PhD candidate in Management Science  
University of North Texas, USA

Title: "Maintaining Value Co-Creation in Education Supply Chains during Disruptions through System Resilience Optimization"

4:00 – 4:20 (Friday, November 5)

Dr. Helena Carvalho  
Assistant Professor, Department of Mechanical and Industrial Engineering  
NOVA School of Science and Technology  
NOVA University Lisbon, Caparica, Portugal

4:20 – 4:40 (Friday, November 5)

Dr. Eugenia Suarez Moran  
Research Professor  
Universidad Panamericana  
Zapopan, Jalisco, Mexico

### 3:00 – 4:45 pm, FRIDAY

### Manufacturing

### Room 6 Virtual

Session Chair: Maribel Fuentes, Physics and Mathematics Department. Universidad de Monterrey

#### **ID 199 Factors of the E-commerce that are Directly Related to the Consumer's Purchase Motivation in Nuevo León, Mexico**

Valentín Lara-Jiménez, Carolina Solís-Peña, UANL School of Chemical Sciences, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, NL 66451, México

Federico G. Figueroa-Garza & Abel Partida-Puente, UANL School of Business, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, NL 66451, México

#### **ID 585 Analysis of Green Supply Chain Management Practices in Automotive Industry Based on Green SCOR MODEL**

TRONNEBATI Imane\* and JAWAB Fouad, Technologies and Industrial Services Laboratory, Higher school of technology, Sidi Mohamed Ben Abdellah University, Fez - Morocco

#### **ID 667 Development of a Mechatronics System for Measuring Soil pH and approximating NPK Value**

Saheed Akande and Mgbeze Emmanuel Chukwuweike, Department of Mechanical and Mechatronics Engineering, Afe Babalola University Ado-Ekiti, Nigeria

Saka Saheed Olaoluwa, National Biotechnology Development Agency, Ilesha, Osun State, Nigeria

### 3:00 – 4:45 pm, FRIDAY

### Technical Session

### Room 7 Virtual

Session Chair:

#### **ID 702 Trash Detection for Computer Vision Using Scaled-Yolov4 on Water Surface**

Presenter: Timothy Kyle Chan

#### **ID 703 Optimizing of the Processing of Sulphide Ores Using Neural Network Technologies**

Presenter: Gulnara Abitova

#### **ID 704 Analysis of Quality of Service, Price and Product Quality to Purchase Decisions in Pt. Japfa Sidoarjo**

Presenter: Muhammad Ikhsan Setiawan

#### **ID 705 Analysis of Effect of Leadership Style Andenvironment Workusing the Performance of Employees Work Motivation as an intervening variable (Case Study at PT. Suparma TBK)**

Presenter: Muhammad Ikhsan Setiawan

#### **ID 706 Community Services Program, Small Medium Enterprises and Entrepreneurship In Indonesia**

Presenter: Achmad Fathoni Rodli

#### **ID 707 Anomaly Detection on the High Throughput Network of the ATLAS TDAQ System**

Presenter: Mitchell Phiri

## November 5, 2021 (Friday) - Session: 5:00 – 6:45 pm

### 5:00 – 6:45 pm, FRIDAY

### Global Supply Chain & Logistics III

### Room 5 Virtual

Session Chair: Mario Garza, Civil and Management Engineering. Universidad de Monterrey

5:00 – 5:20 (Friday, November 5)

Dr. Diego Alberto Oliva  
Associate Professor  
Universidad de Guadalajara, CUCEI  
Guadalajara y alrededores, México

5:20 – 5:40 (Friday, November 5)

Dr. Satish Vadlamani  
Sr. Mgr. Supply Chain Analytics  
Kenco Group  
Chattanooga, Tennessee, USA

5:40 – 6:00 (Friday, November 5)

Associate Prof. Dr. Raja Zuraidah Raja Mohd Rasi (PhD)  
Associate Professor in Supply Chain Management, Department of Production and Operations Management  
Director, Marketing and Corporate Communication Office  
Universiti Tun Hussein Onn Malaysia (UTHM), Batu Pahat, Johor, Malaysia

6:00 – 6:20 (Friday, November 5)

Ferry Jie, CMILT, PhD  
Associate Professor, School of Business and Law  
Discipline of Business Systems and Operations  
Edith Cowan University, Joondalup WA 6027, Australia

Presentation title: Global Supply Chain Management: Future Research Opportunities

### 5:00 – 6:45 pm, FRIDAY

### Operations Management

### Room 6 Virtual

Session Chair: Lino Garza, Physics and Mathematics Department, Universidad de Monterrey

#### **ID 521 An aggregated time series forecasting model for the health and wellness sector: case of a Brazilian retail company**

Carlos Ernani Fries and Vitor Rodrigues, Department of Production and Systems Engineering, Federal University of Santa Catarina, Florianópolis, SC, Brazil

#### **ID 522 Financing Small-Scale Manufacturing in South Africa – The Egg and Chicken Problem**

Sizwe Mkwana, Department of Business Management, University of Johannesburg, Cnr Kingsway & University Road, Auckland Park, South Africa

#### **ID 614 The Effect Of Financial Literation On Investing In Indonesia Capital Market (Study on College Students in Bandung City, Indonesia)**

Budi Rustandi Kartawinata, Kukuh Panuntun Wicaksono, Aldi Akbar, Faculty of Communication and Business, Telkom University, Jalan Terusan Buah Batu, Bandung 40257, Indonesia

#### **ID 615 Employee Performance Improvement As An Impact of Applying Organizational Culture**

Ida Nurnida, Mahendra Fakhri, Nurjuanda, School of Communication and Business Telkom University, Indonesia

#### **ID 616 What Kind of Improvement to Increase Job Satisfaction among The Employees?**

Romat Saragih, Mahendra Fakhri, Fauzya Binaprayogi, School of Communication and Business Telkom University, Indonesia

#### **ID 617 The Effect of Organizational Culture toward Employee Performance at Convenience Store in Bandung**

M. Yahya Arwiyah, Mahendra Fakhri, Edo Meitanama, School of Communication and Business Telkom University, Indonesia

#### **ID 618 The Influence of Work Ethic on Employee's Performance of Small-Medium Enterprises Restaurant**

Tri Indra Wijaksana, Mahendra Fakhri, Riska Hernayanti Pajar, School of Communication and Business Telkom University, Indonesia

#### **ID 694 Factors Bridging the Satisfaction of Generational Gap in Philippine Healthcare System Telemedicine Use**

Charish Jen Rala, Jovilyn Abarico, Obeaya Marie Camota, Andrea Cumpa, Dianne Lizbeth Perico, Kenneth Salvante, Pamela Anne Mae Velasco, Romalyn Galingan, Arriane Palisoc, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City, Cubao, Quezon City, Philippines

### 5:00 – 6:45 pm, FRIDAY

### Technical Session

### Room 7 Virtual

Session Chair: Mahir Faysal

#### **ID 626 Bali And Regional Government Support, Transportation Taking Off**

Muhammad Ikhsan Setiawan and Ronny Durrotun Nasihien, Department of Civil Engineering, Narotama University, Surabaya, Indonesia  
Mohd Adib Mohd Razi, Faculty of Civil Engineering and Building Environment, Universiti Tun Hussein Onn Malaysia, Parit Raja, Malaysia  
Wahyu Mulyo Utomo, Faculty of Electrical and Electronic Engineering, Universiti Tun Hussein Onn Malaysia, Parit Raja, Malaysia  
Agus Sukoco, Tubagus Purworu miardi and Achmad Muchayan, Department of Management, Narotama University, Surabaya, Indonesia  
Muhammad Isradi, Department of Civil Engineering, Universitas Mercu Buana, Jakarta, Indonesia

#### **ID 627 Bali Government Support To Blowed Up Tourism**

I Nyoman Sudapet, Agus Sukoco, Elok Damayanti, Ani Wulandari and Amrun Rosyid, Dept. of Management, Narotama University, Surabaya  
Ronny Durrotun Nasihien and Muhammad Ikhsan Setiawan, Department of Civil Engineering, Narotama University, Surabaya, Indonesia



Che Zalina Zulkifli, Faculty of Arts, Computers and Creative Industries, Dept. of Computers, Universiti Pendidikan Sultan Idris, Tanjong Malim, Malaysia  
 Abdul Talib Bon, Department Of Production and Operations Management, Universitas Tun Hussein Onn Malaysia, Parit Raja, Malaysia

**ID 628 Antiosteoporotic activity of Pandanus odoratissimus seed extract in ovariectomized rats**

Sri Endarti Rahayu, Suprihatin, Meslina Astuti Manik, Ernawati Sinaga Suprihatin, Faculty of Biology, Universitas Nasional Jakarta, Indonesia

**ID 629 Species Richness of Sea Cucumbers in Saleh Bay Based on Catch of Fishermen**

Neri Kautsari, Aquatic Resources Management, Samawa University, Sumbawa Besar, Indonesia  
 Ilham Syahputra, Wildlife Conservation Society, West Nusa Tenggara, Indonesia

**ID 630 Antimicrobial Activity of Endosymbiont Bacteria Isolated from Marine Sponges Collected from Kotok Kecil Island, Jakarta**

Alvira Noer Effendi, Noverita, and Ernawati Sinaga\*, Faculty of Biology, Universitas Nasional, Jakarta, Indonesia  
 Tri Aryono Hadi, Research Center for Oceanography, Indonesian Institute of Sciences

**ID 631 Performance Evaluation of Hybrid ZigBee-Fiber Optic for Wireless Sensor Network System**

Raihan Zaky Thamrin, Octarina Nur Samijayani, Dwi Astharini, Suci Rahmatia, Electrical Engineering Department, University of Al Azhar Indonesia

**ID 632 Utilization of Dates (*Phoenix dactylifera* L.) and Bilimbi (*Averrhoa bilimbi* L.) in Making Effervescent Tablet**

Melanie Cornelia and Cindy Oktavia, Food Technology Study Program, Pelita Harapan University, Lippo Karawaci, Tangerang 15811, INDONESIA

**ID 633 Quality Analysis of Carrot and Tomato Juices Formula to Increase Local Resources Added Value**

Farida, Yenisbar, Faculty of Agriculture, Universitas Nasional, Jakarta, Indonesia

**ID 670 Biodiversity in Urban Area: Potential Biodiversity of Tanjung Priok, North Jakarta and the Impact of Conservation Programs**

Nonon Saribanon, Fauziah Ilmi, and Annisa Haryanti Nurhasanah, Universitas Nasional, Pasar Minggu, South Jakarta, Indonesia  
 Dede Niman and Eka Octaviyatna Mulyadi, PT Indonesia Power Priok POMU, Indonesia

**5:00 – 6:45 pm, FRIDAY**

**Technical Session**

**Room 8 Virtual**

Session Chair: Muhammad Ikhsan Setiawan, Narotama University, Surabaya, Indonesia

**ID 695 Sustainable Circular Supplier Selection Criteria: An Empirical Study**

Presenter: Maha Morssi

**ID 696 Analysis Risk Modeling of Building Projects and Their Impact on Urban Labor Accidents in Surabaya**

Presenter: Muhammad Ikhsan Setiawan

**ID 697 Analysis of the Management Services Modeling of Flats in Surabaya and its Impact on the Comfort of Residents**

Muhammad Ikhsan Setiawan, Narotama University, Surabaya, Indonesia

**ID 698 Analysis of the Modeling Delay Factor for the Implementation of Flats in Surabaya and Its Impact on the Housing Needs of Urban Communities**

Presenter: Wahyu Ariyanto Aji Pamungkas

**ID 699 Compensation, Supervision, or Work Environment, which has the greatest influence on Work Motivation and Performance?"**

Presenter: Eko Bagus Harja Kusuma

**ID 700 Performance Assessment Analysis of XYZ Private Universities Using Balanced Scorecard Method**

Presenter: Hendarto Hendarto

**ID 701 Building Information Modeling (Bim) Implementation Model For Facility Management**

Presenter: Ary Sunantiyo

**5:00 – 6:45 pm, FRIDAY**

**Technical Session**

**Room 9 Virtual**

Session Chair:

**ID 673 Analyzing the Relationship of Work Environment and Quality of Work Life on Employee Performance: The Mediating Role of Organizational Commitment**

Subianto Karoso, Faculty of Language and Art, Universitas Negeri Surabaya, Lidah Wetan, Lakarsantri, Surabaya, Jawa Timur 60213, Indonesia  
 Riinawati, Faculty of Tarbiyah and Education, Universitas Islam Negeri Antasari Banjarmasin, Banjarmasin Timur, Banjarmasin, Kalimantan Selatan 70235, Indonesia  
 Rico Nur Ilham, Rany Gesta Putri Rais, Faculty of Economics and Business, Universitas Malikussaleh Blang Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia  
 Dara Latifa, Politeknik Pertanian Negeri Payakumbuh, Koto Tuo, Harau, Lima Puluh Kota, Sumatera Barat 26271, Indonesia  
 Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia, Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 674 The Factors that Influence Job Transfer and Its Impact on Organizational Performance: Mini-Review Approach**

Istyadi Insani, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 675 The Implementation of Poverty Alleviation Policy during the COVID-19 Pandemic: A Case Study of Pekalongan Regency, Indonesia**

Mohammad Yulia Akbar, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia

Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

**ID 676 Identifying the Ethics of Preparing Financial Statements among Islamic Boarding School Students in Central Java, Indonesia**

Muhammad Wildan Sholih, Annisa Qurrota A'yun, Imam Prayogo, Department of Accounting, Faculty of Vocational School PSDKU Pekalongan, Universitas Diponegoro, Indonesia

Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia

Teuku Afrizal, Department of Public Administration, Faculty of Social Science and Political Science, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia

**ID 677 Implementation of the Role-Playing in Developing the Speaking Skills for Early Childhood**

Kartika Fajriani, Universitas Nahdlatul Ulama, Samarinda City, East Kalimantan 75251, Indonesia

Esti Royani, Universitas 17 Agustus 1945, Samarinda City, Kalimantan Timur 75123, Indonesia

Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

Teuku Afrizal, Department of Public Administration, Faculty of Social Science and Political Science, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia

**ID 693 Big Data and Artificial Intelligence in Policy Making: A Mini-Review Approach**

Eko Eddy Supriyanto, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia

Jumadil Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

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**November 5, 2021 (Friday) - Session: 7:00 – 10:00 pm**

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**Conference Awards Ceremony at Cintermex**

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# IEOM Student Chapters around World

<b>Algeria</b>		
1.	Adrar University	
<b>Australia</b>		
2.	Queensland University of Technology (QUT), Brisbane	
<b>Bahrain</b>		
3.	University of Bahrain	
<b>Bangladesh</b>		
4.	Ahsanullah University of Science & Technology (AUST)	
5.	Bangladesh Institute of Management (BIM)	
6.	Bangladesh Univ. of Engineering and Technology (BUET)	
7.	Bangladesh University of Textiles (BUTEX)	
8.	Chittagong University of Engineering and Technology (CUET)	
9.	Daffodil International University (DIU)	
10.	International Islamic University of Chittagong (IIUC)	
11.	International University of Business Agriculture and Technology (IUBAT)	
12.	Islamic University of Technology (IUT)	
13.	Jessore University of Science and Technology (JUST)	
14.	Khulna University (KU)	
15.	Khulna University of Engineering and Technology (KUET)	
16.	Military Institute of Science and Technology (MIST)	
17.	National Institute of Textile Engineering and Research (NITER)	
18.	Rajshahi University (RU)	
19.	Shah Jalal University of Science and Technology (SUST)	
20.	University of Chittagong	
21.	World University Bangladesh (WUB)	
<b>Botswana</b>		
22.	University of Botswana	
<b>Brazil</b>		
23.	Federal University of Sao Carlos (UFSCar)	
24.	Federal University of Santa Catarina (UFSC)	
25.	Univeristy of Sao Paulo (USP) – Sao Carlos	
26.	Federal Institute of Sao Paulo (IFSP) – Sorocaba	
27.	Faculdade de Engenharia de Sorocaba (FACENS)	
<b>Canada</b>		
28.	Concordia University	
29.	Humber Institute of Technology and Advanced Learning	
30.	Polytechnique Montreal	
31.	University of New Brunswick at Fredericton	
32.	University of Waterloo	
33.	University of Windsor	
<b>Colombia</b>		
34.	Fundación Univ. Tecn. Comfenalco, Cartagena, Bolívar	
35.	University of Rosario, Bogota	
36.	University of Quindío	
37.	Universidad de San Buenaventura, Cali, Valle	
<b>Costa Rica</b>		
38.	University of Costa Rica	
<b>Czech Republic</b>		
39.	University of West Bohemia, Pilsen	
<b>Ecuador</b>		
40.	Technical University of Ambato	
<b>Egypt</b>		
41.	Zagazig University	
<b>Ethiopia</b>		
42.	Bahir Dar Institute of Technology	
<b>Finland</b>		
43.	University of Vaasa	
<b>France</b>		
44.	IESEG School of Management	
45.	Lorraine University, Metz	
<b>Greece</b>		
46.	Accra Technical University	
<b>Ghana</b>		
47.	Technological Education Institute (TEI), Thessaly, Larissa	
<b>Haiti</b>		
48.	Université Quisqueya	
<b>India</b>		
49.	College of Engineering and Technology, Bhubaneswar, Odisha, India	
50.	College of Engineering Guindy (Anna University), Chennai	
51.	Guru Nanak Dev Engineering College, Ludhiana, Punjab	
52.	Pandit Dendayal Petroleum Univ., Ahmedabad, Gujrat	
53.	P.D.A. College of Engineering, Gulbarga, Karnataka, India	
54.	Vellore Institute of Technology	
55.	Vidya Jyothi Institute of Technology, Hyderabad	
<b>Indonesia</b>		
56.	Atma Jaya Catholic University	
57.	Bina Nusantara University (Binus), Indonesia	
58.	Institut Teknologi Bandung	
59.	Institut Teknologi Sepuluh Nopember (ITS)	
60.	Sampoerna University, Jakarta	
61.	Shipbuilding Institute of Polytechnic Surabaya	
62.	Tarumanagara University	
63.	Universitas Diponegoro (Undip)	
64.	Universitas Iqra Buru	
65.	Universitas Islam Negeri Alauddin Makassar	
66.	Universitas Sebelas Maret (UNS), Surakarta	
67.	University of Indonesia	
<b>Iran</b>		
68.	MehrAstAn University, Guilan	
69.	University of Eyvanekey	
<b>Iraq</b>		
70.	Babylon University	
<b>Israel</b>		
71.	Sapir Academic College	
<b>Italy</b>		
72.	University of Salento	
<b>Japan</b>		
73.	Ashikaga University	
<b>Jordan</b>		
74.	Hashemite University	
<b>Kenya</b>		
75.	Kenyatta University, Nairobi	
<b>Libya</b>		
76.	Libyan Academy	
<b>Malaysia</b>		
77.	Universiti Malaysia Sabah (UMS)	
78.	Universiti Putra Malaysia (UPM)	
79.	Universiti Teknologi Malaysia (UTM)	
80.	Universiti Tun Hussein Onn Malaysia (UTHM)	
81.	Universiti Utara Malaysia (UUM)	
<b>Morocco</b>		
82.	Akhawayn University	
83.	Ecole Mohammadia d'Ingénieurs (EMI)	
84.	Sidi Mohamed Ben Abdellah University of Fez, Morocco	
85.	National School of Applied Sciences Kenitra, Ibn Tofail University	
<b>Namibia</b>		
86.	National Univ. of Sci. and Tech. in Windhoek, Namibia	
<b>Nepal</b>		
87.	Kathmandu University	
88.	Tribhuvan University	
<b>Nigeria</b>		
89.	Covenant University	
90.	University of Ibadan	
<b>Oman</b>		
91.	Sultan Qaboos University	
92.	Middle East College	
<b>Pakistan</b>		
93.	Dawood University of Engineering and Technology, Karachi	
94.	Government College University Faisalabad	
95.	Mehran University of Engineering and Technology, Jamshoro, Sindh	
96.	Riphah International University, Lahore Campus	
97.	University of Engineering and Technology, Lahore	
98.	UOT – Nowshera	
<b>Papua New Guinea</b>		
99.	Papua New Guinea University of Technology	
<b>Paraguay</b>		
100.	National University	
<b>Peru</b>		
101.	National University of San Antonio Abad, Cusco, Peru	
<b>Philippines</b>		
102.	Bulacan State University, Malolos City, Bulacan	
103.	LPU Laguna	
104.	Mapua University	
<b>Qatar</b>		
105.	Qatar University	
<b>Saudi Arabia</b>		
106.	Alfaisal University	
107.	Effat University	
108.	King Abdulaziz University (KAU)	
109.	King Abdulaziz University, Rabigh	
110.	King Fahd University of Petroleum and Minerals (KFUPM)	
111.	King Saud University (KSU)	
112.	Umm Al-Qura University (UQU)	
113.	Princes Nourah University (PNU)	
114.	Prince Sattam Bin Abdulaziz University (PSAU)	
115.	Prince Sultan University (PSU)	
116.	Taibah University	
117.	University of Tabuk	
118.	Taibah University	
<b>South Africa</b>		
119.	Durban University of Technology (DUT)	
120.	Tshwane University of Technology (TUT)	
121.	University of Johannesburg (UJ)	
122.	University of South Africa (UNISA)	
123.	Vaal University of Technology (VUT)	
<b>Sri Lanka</b>		
124.	University of Kelaniya	
125.	University of Peradeniya	
<b>Sudan</b>		
126.	Sudan University of Science and Technology, Khartoum	
<b>Thailand</b>		
127.	Chulalongkorn University, Bangkok	
128.	Chiang Mai University	
<b>UAE</b>		
129.	University of Science & Technology of Fujairah (USTF)	
<b>UK</b>		
130.	University of Derby	
131.	University of the West of England (UWE), Bristol	
<b>USA</b>		
132.	Central Connecticut State University	
133.	Eastern Michigan University	
134.	Lawrence Technological University, Michigan, USA	
<b>Venezuela</b>		
135.	Catholic University Andrés Bello (UCAB), Caracas	
<b>Zambia</b>		
136.	University of Zambia	
137.	Copperbelt University	
138.	Evelyn Hone College	
<b>Zimbabwe</b>		
139.	University of Zimbabwe, Harare	
140.	National University of Science and Technology	

# 27<sup>th</sup> IEOM Global Engineering Education

## DISTINGUISHED SPEAKERS

### Global Engineering Education I

1:00 – 2:40 pm, Wednesday, November 3

Session Chair: Dr. Eldon Caldwell

1:00 – 1:20 (Wednesday, November 3)



**Alma Gonzalez, Ph.D.**

**Principal Consultant, STRATHA Learning Corporation, Mexico**

***University-Industry Collaboration on Engineering Workforce Training and Development: The Case of the Mexican Aerospace Industry***

Alma Gonzalez, Ph.D. is the Principal Consultant at STRATHA Learning Corporation, a global training and development firm. Dr. Gonzalez holds an MSc. in Education Management and Development from the Instituto Politécnico Nacional (Mexico) and an MSc. in International Political Economy and Ph.D. in Strategic Studies from the Nanyang Technological University (Singapore). Dr. Gonzalez is an expert in talent development who researches and forecasts the future of learning and work. She uses her research-based knowledge to create innovative learning and development solutions that enhance professional and organizational performance worldwide. Dr. Gonzalez has recently completed empirical research on university-industry collaboration on engineering workforce education in

the context of the Fourth Industrial Revolution. She has worked with individuals, corporations, governments, and higher education institutions around the world. Dr. Gonzalez is a member of the Association for Talent Development and the International Network of Competitiveness Researchers.

1:20 – 1:40 (Wednesday, November 3)



**Dr. Gulnara Abitova**

**Associate Professor, Business-Trainer, Scientist Advisor, and Researcher  
Astana IT University (Nur-Sultan) and Almaty Management University (AlmaU)  
Nur-Sultan, Kazakhstan**

Dr. Abitova graduated Postdoctoral Program in Control Systems from State University of New York (Binghamton, NY, USA). She has been an invited to Computer and Electrical Engineering Department at State University of New York at Binghamton (NY, USA) as an Invited Researcher. Gulnara Abitova is Invited Professor at the Savonia University of Applied Sciences and Technology (Kuopio, Finland). Dr. Abitova holds PhD Degree in Automation and Control from Eurasian National University named by L.N. Gumilyov (Kazakhstan), Ph.D. Degree (Doctor of Technical Sciences) in Automation of Metallurgy Production from National Academic Research Institute of Metallurgy and Enrichment of the Ministry of Education and Science (Almaty, Kazakhstan), and Master's Degree in Cybernetics of Technological Processes from National Research Technological University "Moscow State University of Steel and Alloys" (Moscow, Russian Federation). Professor Abitova is Holder of Several International Grants and Scholarships: International Scholarship from State University of New York for Doctoral Research Work (USA); International Grant from the President of Republic of Kazakhstan – Scholarship for the Study Abroad (NY, USA); Erasmus+ Program (Staff Mobility for Teaching Mobility Program) for giving the Lectures at Savonia University of Applied Sciences (Kuopio, Finland); International Grant from Erasmus Mundus Program for Staff Mobility Program (Bilbao, Spain); International Grant for the Educational Program (Singapore Management University and Chinese University at Hong Kong); International Scholarship for Government Employees and Scientists (KOICA, South Korea). Gulnara Abitova is Associate Professor, Researcher-Teacher, Science Advisor, Business-Trainer, Lecturer at Astana IT University (Nur-Sultan) and Almaty Management University (AlmaU); Professor of Polylingual Education and Researcher in the School of Government Policy at the AlmaU (Almaty); Head of the Project Group and Ass. Professor at Kazakh-Russian International University (Aktobe). Prior to this current position, she was Director and Executive Director of two Business-Companies (Group-Independent LLP; Best-Group NS LLP, Nur-Sultan); Vice-President of the Kazakh-Russian International University; Head of the System Analyses and Management Department, Director of the Department for International Cooperation, Director of the Science Department at the L.N.Gumilyov Eurasian National University (Astana, Kazakhstan); General Director of the Kazakh Information Technology Research Institute (KITRI, Kazakhstan); Deputy Director of the National Accreditation Center, Deputy Director of the Science Committee (Ministry of Education and Science, Kazakhstan); Department Director of the Postgraduate Studies (Eastern-Kazakhstan State University, Kazakhstan); Research Engineer in the Laboratory of Physical and Chemical Research (East-Kazakhstan Scientific Research Institute for Non-Ferrous Metals, Kazakhstan) and Researcher in the L.N.Gumilyov Eurasian National University (ENU, Kazakhstan).

Dr. Abitova is a Valued IEEE Member; Founded President of IEOM Society in Kazakhstan; Former National Focal Point of UNESCO's Education for Sustainable Development was also the National Coordinator of UNESCO's Education for Sustainable Development, (UNESCO-Kazakhstan). The same time she was a Member of many Working Groups and Temporary Committee of the Ministry of Education and Science (Kazakhstan, 2003-2012). She has been the Distinguished Speaker at Global Engineering Education Forum of IEOM, Invited Speaker at the International Conferences (IEEE, SPIE, CSDM, ICUMT) and published more than 80 research articles in the reputed international proceedings and journals. She served as the Track Chair in the IEOM conferences.

1:40 – 2:00 (Wednesday, November 3)



**Adedeji B. Badiru, Ph.D., PE, PMP, FIIE**

**Dean, Graduate School of Engineering and Management  
Professor of Systems Engineering  
AFIT/EN, Air Force Institute of Technology  
Wright-Patterson Air Force Base, Dayton, Ohio, USA**

Professor Adedeji Badiru is a Professor of Systems Engineering and also SES-level Dean of the Graduate School of Engineering and Management at the Air Force Institute of Technology (AFIT). He has oversight for planning, directing, and controlling operations related to granting doctoral and master's degrees, professional continuing cyber education, and research and development programs for the US Air Force. He was previously Professor and Head of Systems Engineering and Management at AFIT, Professor and Department Head of Industrial Engineering at the University of Tennessee – Knoxville, and Professor of Industrial Engineering and Dean of University College at the University of Oklahoma, Norman. He is a registered professional engineer (PE), a certified Project



Management Professional (PMP), a Fellow of the Institute of Industrial & Systems Engineers, and a Fellow of the Nigerian Academy of Engineering. He is also a Program Evaluator (PEV) for ABET. He holds a leadership certificate from the University Tennessee Leadership Institute. He has BS in Industrial Engineering, MS in Mathematics, and MS in Industrial Engineering from Tennessee Technological University, and Ph.D. in Industrial Engineering from the University of Central Florida. His areas of interest include mathematical modeling, project modeling and analysis, economic analysis, systems engineering modeling, computer simulation, and productivity analysis. He is a prolific author, with over 35 books, over 30 book chapters, over 130 Journal and magazine articles, and over 200 conference presentations. He is a member of several professional associations and scholastic honor societies.

Professor Badiru, a world-renowned educator, has won several awards for his teaching, research, administrative, and professional accomplishments. Some of his selected awards include the 2009 Dayton Affiliate Society Council Award for Outstanding Scientists and Engineers in the Education category with a commendation from the 128th Senate of Ohio, 2010 ASEE John Imhoff Award for his global contributions to Industrial Engineering Education, the 2011 Federal Employee of the Year Award in the Managerial Category from the International Public Management Association, Wright Patterson Air Force Base, the 2012 Distinguished Engineering Alum Award from the University of Central Florida, the 2012 Medallion Award from the Institute of Industrial Engineers for his global contributions in the advancement of the profession, 2016 Outstanding Global Engineering Education Award from the Industrial Engineering and Operations Management (IEOM), 2015 Air Force-level Winner of the National Public Service Award from The American Society for Public Administration and the National Academy of Public Administration, 2013 Father D. J. Slattery Excellence Award, Saint Finbarr's College Alumni Association, North America Chapter, 2013 Award Team Leader, Air Force Organizational Excellence Award for Air University C3 (Cost Conscious Culture), 2013 Finalist for Jefferson Science Fellows Program, National Academy of Sciences, 2012 Book-of-the-Month Recognition for Statistical Techniques for Project Control from the Industrial Engineering Magazine, and the 2010 Industrial Engineering Joint Publishers Book-of-the-Year Award for The Handbook of Military Industrial Engineering.

Professor Badiru is also the book series editor for CRC Press/Taylor & Francis book series on Systems Innovation. He has served as a consultant to several organizations around the world including Russia, Mexico, Taiwan, Nigeria, and Ghana. He has conducted customized training workshops for numerous organizations including Sony, AT&T, Seagate Technology, U.S. Air Force, Oklahoma Gas & Electric, Oklahoma Asphalt Pavement Association, Hitachi, Nigeria National Petroleum Corporation, and ExxonMobil. He has served as a Technical Project Reviewer, curriculum reviewer, and proposal reviewer for several organizations including The Third-World Network of Scientific Organizations, Italy, Social Sciences and Humanities Research Council of Canada, National Science Foundation, National Research Council, and the American Council on Education. He is on the editorial and review boards of several technical journals and book publishers. Prof. Badiru has also served as an Industrial Development Consultant to the United Nations Development Program. In 2011, Prof. Badiru led a research team to develop analytical models for Systems Engineering Research Efficiency (SEER) for the Air Force acquisitions integration office at the Pentagon. He has led a multi-year multi-million dollar research collaboration between the Air Force Institute of Technology and KBR Aerospace Group. Prof. Badiru has diverse areas of avocation. His professional accomplishments are coupled with his passion for writing about everyday events and interpersonal issues, especially those dealing with social responsibility. Outside of the academic realm, he writes motivational poems, editorials, and newspaper commentaries; as well as engaging in paintings and crafts. Professor Badiru is the 2020 recipient of the Lifetime Achievement Award from Taylor and Francis publishing group. He was also part of the AFIT team that led the institution's receipt of the 2019/2020 US Air Force Organizational Excellence Award.

2:00 – 2:20 (Wednesday, November 3)



**Prof Hodson Makurira**  
Dean, Faculty of Engineering  
University of Zimbabwe, Harare, Zimbabwe

#### **Industry 4.0 Education in Zimbabwe**

Prof Makurira is currently the Dean of the Faculty of Engineering at University of Zimbabwe. He has extensive experience working in the water sector having worked for the Ministry of Water Resources and Development and ZINWA prior to joining the Civil Engineering Department in 2003. He specialises in aspects related to integrated water management and hydrology.. He lectures water engineering courses at BSc and postgraduate level. In the process, he has supervised BSc projects, MSc and PhD researches in the water engineering field. This work has led to several publications in international journals. Prof Makurira is a Fellow of the Zimbabwe Institution of Engineers and is registered as a Professional Engineer with the Engineering Council of Zimbabwe. He has also participated in several community projects, capacity building projects and consultancies in the region including lecturing and examining at various universities in the region and beyond.

Prof Makurira received PhD Water Management & Hydrology (Delft University of Technology, The Netherlands), MSc in Water & Environmental Resources Management (UNESCO-IHE, Netherlands), Post-graduate Diploma in Water & Environmental Resources Management (UNESCO-IHE, The Netherlands), Bachelor of Science Honours Degree in Civil Engineering (UZ). His research interests are water resources management, hydrology, integrated water resources management, water resource modelling and simulation, environmental impact assessment, water engineering, water conservation.

2:20 – 2:40 (Wednesday, November 3)



**Professor Eldon G. Caldwell Marin, Ph.D., Sc.D, Dr.Ed.**  
Director, Industrial Engineering Department, Engineering School  
University of Costa Rica, San Jose, Costa Rica

#### **Theoretical socio-educational foundations of the labor insertion of people with disabilities in industrial environments: how to achieve more inclusive industrial environments?**

Eldon Caldwell is full professor/Cathedraticus of the University of Costa Rica, Central America; member of the IEOM Society Academy of Fellows and member of the IEOM Society Global Council. Also, he has been recognized by the IEOM Society with the "Outstanding Service Award" for his career of over 30 years as an educator, researcher and promoter of development of industrial engineering and as "Distinguished Professor" by IEEE Computer Society,

USA. Dr. Caldwell earned his B.Sc. and Master degree in Industrial Engineering at University of Costa Rica and he earned a Master degree in Service Marketing, as well in Financial Analysis at Interamerican University of Puerto Rico; M.Sc. Health Management Systems at UNED, Costa Rica and a M.Sc. Operations Management at ITESM, México. Finally, he earned three doctoral degrees: 1-Ph.D. in C.Sc. / Industrial Engineering, University of Nevada, USA / Autonomous University of Central America; 2- Ph.D. (Sc.D.) in Robotics and Automation, University of Alicante, Spain; and 3-Ph.D. (Dr. Ed.) in Education at the University of Costa Rica, developing the "Theory of Socio-educational Exergy-Anergy and Entropy".

He is author of many scientific articles and two books: "Marketing of Social Products & Services", UCR Publications; and "Lean Manufacturing: Fundamentals and techniques for cycle time reduction", Kaikaku Ins. Press, USA. Dr. Caldwell served as Operations Manager at MASECA, CA;

Lean Manufacturing Project Manager at Eaton Corp. Costa Rica, General Manager at Quirós & Cia-Bandag Inc. and General Manager at Lean Systems Intl., USA. He has more than 30 years of experience as advisor and consultant in Operations Management, Lean Manufacturing and Lean Logistics at Interamerican Bank for Development, WHO, UN, World Wide Bank, Coca-Cola, Ministry of Health, Costa Rica, Honduras, Panamá, Costa Rican Institute for Electricity, RTC- Perú, Young Electrical Signs, Nevada, USA, AirCare Inc., Reno, Nevada, Plan International-Honduras, Bournes Co., DOLE Co. and many others. Currently, Dr. Caldwell is Director of Department at Engineering School of University of Costa Rica.

2:40 – 3:00 (Wednesday, November 3)



**Dr. Ana Julia Acevedo Urquiaga**

**Docente-investigador and Directora Grupo Investigación Desarrollos Industriales y SST  
Fundación Universitaria San Mateo, Bogota, D.C., Capital District, Colombia**

***Teaching Industrial Engineering in the post-pandemic***

Ana Julia Acevedo Urquiaga is currently the leader of the Industrial Development and Occupational Safety and Health research group at the San Mateo University Foundation, in Bogotá, Colombia. She is a research professor at that university and a member of the European-Latin American Center for Logistics and Ecological Projects, attached to the Humboldt University of Berlin. She is a Computer Engineer from the Technological University of Havana "José Antonio Echeverría" (CUJAE) in 2007; She is a doctor in Technical Sciences from the university itself in 2014. She has 12 years of experience as a teacher, researcher and consultant for which she has obtained several awards; among them, the National Prize of the Academy of Sciences of Cuba. She has been a fellow at the Technische Universität Dresden, Technische Hochschule Wildau and Högskola i Borås in Sweden. She is a visiting professor in postgraduate activities at the Oilito University of Colombia and the Technical University of Manabí, Ecuador. She is the author of more than 17 publications in indexed journals, 6 book chapters, and more than 20 presentations at international events.

**Global Engineering Education II**

3:00 – 5:00 pm (Mexico Time), Wednesday, November 3

Session Chairs: Dr. Affan Badar and Dr. Mehran Shahhosseini

**Special Session on Higher Education in Technology Management**

**Chair**



**Dr. M. Affan Badar, PhD, CPEM**

**Professor and Former Chair, Department of Applied Engineering and Technology Management  
Indiana State University, Terre Haute, Indiana, USA**

M. Affan Badar, PhD, CPEM is a Professor and former Chair of the Department of Applied Engineering and Technology Management at Indiana State University, USA. From 2016 to 2018, he was Professor and Chair of the Department of Industrial Engineering and Engineering Management at the University of Sharjah, UAE. He received a PhD Degree in Industrial Engineering from the University of Oklahoma in 2002, MS in Mechanical Engineering from King Fahd University of Petroleum and Minerals in 1993, and MSc in Industrial Engineering in 1990 and BSc (Hons) in Mechanical Engineering in 1988 from Aligarh Muslim University. Dr. Badar has published more than 70 articles in refereed journals and proceedings in the areas of quality, reliability, coordinate metrology, lean manufacturing, health care, energy system design, and supply chain. He is a member of IISE, IEOM, ASEM, and ASME.

**Co-Chair**



**Dr. A. Mehran Shahhosseini**

**Professor of Engineering/Mechanical Engineering Technology  
Director, Ph.D. in Technology Management Program  
Department of Applied Engineering and Technology Management  
College of Technology  
Indiana State University, Terre Haute, Indiana, USA**

A. Mehran Shahhosseini, D. Eng., is a Professor and Director of Ph.D. in Technology Management Program in the Department of Applied Engineering and Technology Management at Indiana State University, USA. He received his doctorate degree in Mechanical Engineering from Lamar University, Beaumont, Texas, USA in 1999, M.Sc. in Materials Engineering, Isfahan University of Technology, Isfahan, Iran in 1991, and B.Sc. Metallurgical Engineering, Tehran University, Tehran, Iran, in 1988. He has published over 50 articles in different journals and conference proceedings. He has served as principal and co-principal investigator for research projects sponsored by National Science Foundation, Ford Motor Company, and the US Army. Before working at Indiana State University, he was a faculty at the University of Louisville for ten years. He also has over four years of industrial experience working in different steel manufacturing plants and research laboratory of Ford Motor Company as a Senior Researcher. He is a member of ASME, ASEE, and ATMAE.

3:00 – 3:20 pm (Wednesday, November 3)

**Dr. Arezou Harraf**

**Head of the Department of Business Studies  
Box Hill College Kuwait**

***The importance of Technology Management for successful strategic direction within organizations***

Dr. Harraf is the founder and CEO of Learn & Evolve LLC. In this capacity, she helps organizations use strategy, science, and psychology to address workforce challenges such as low performance, productivity, turnover, and retention issues. With a focus on the future of technology and HR, she consults with organizations on how to improve existing in-house technology platforms to enhance features relating to HR and employee needs.

Additionally, Dr. Harraf serves as the Head of the Department of Business Studies at Box Hill College and is a Visiting Assistant Professor at the University of Nevada Las Vegas during the summer terms. She also serves as an academic advisor for several MBA students at Maastricht University. Dr. Harraf has many professional affiliations and is a frequent speaker on effective leadership and diversity and inclusion.

An experienced educator, Dr. Arezou Harraf holds a Ph.D. in Technology Management and Human Resource Training and Development from Indiana State University and a Master of Science in Organizational Leadership from Quinnipiac University. She further holds a post-graduate certificate in Artificial Intelligence Leadership from the University of Texas-Austin and is a SHRM Senior Certified Professional (SHRM-SCP). Dr. Harraf is a proud SHRM Certification Prep and HR Essentials course provider, where she utilizes her academic and industry experience in enhancing learners' experiences.

3:20 – 3:40 pm (Wednesday, November 3)



**Dr. Timothy Anderson**

**Department Chair, Engineering and Technology Management Department  
Portland State University, Portland, Oregon, USA**

***Models for Moving Technology Management Education Online during the Covid Era***

Dr. Timothy Anderson is the Department Chair of the Engineering and Technology Management department at Portland State University. He earned an Electrical Engineering degree from the University of Minnesota, as well as both M.S. and Ph.D. degrees in Industrial Engineering from the Georgia Institute of Technology. Since 1987, Dr. Anderson has been the Program Chair or Co-Chair 20 times for PICMET. He leads the Extreme Technology Analytics research group and has over 60 refereed publications in his research areas. He was President of Omega Rho, the International Honor Society for Operation Research. He co-led the creation of six graduate certificates at

Portland State, including the most recent, Business Intelligence and Analytics.

Dr. Anderson is one of the few Engineering Department Chairs in the country to be a member of a Native American tribe, the Pokagon Band of Potawatomi, and he works to ensure that future engineers and scientists better represent the community. He served on the MESA-Oregon advisory board for over a decade and is an advocate for diversity and inclusion in STEM. He has been the PSU AISES-Chapter Advisor since 2005 and mentor for the BUILD-EXITO program. He has been recognized as a Sequoyah Fellow of the American Indian Science and Engineering Society.

3:40 – 4:00 pm (Wednesday, November 3)



**Prof. Nesli Alp**

**Dean and Professor, College of Technology  
Indiana State University, Terre Haute, Indiana, USA**

***The importance of higher education in Technology Management: Similarities and differences between Technology Management and Engineering Management***

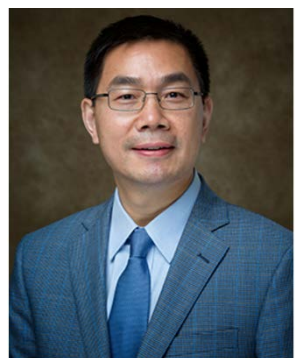
Nesli Alp is the Dean of the College of Technology at Indiana State University. She joined ISU in August 2018 from the University of Tennessee at Chattanooga where she has worked for 19 years, starting as an Assistant Professor to the Associate Dean and Interim Dean positions in the College of Engineering and Computer Science.

Nesli has an undergraduate and master's degrees in Industrial Engineering from Istanbul Technical University and Ph.D. in Engineering Management from the University of Missouri-Rolla (Missouri University of Science and Technology). Her specialization is in the areas of Project Management, Quality Control, and Operations Research. She has more than 100 publications and received more than \$10 million in grants and gifts. She has been selected as the Distinguished Department Head and has received Teaching, Research, and Service awards multiple times.

Nesli is a Professional Engineer and speaks French and Turkish in addition to English.

As the Dean of the College of Technology at ISU, Nesli's goal is to grow the new engineering program in the College and bring more visibility to other unique programs, like packaging, safety, unmanned systems, etc. Her first and utmost priority is always students and prepare them for real world. She believes that it's a perfect time to grow STEM related fields since there is a talent shortage in that area. Her goals are to grow the College by bringing more students who are interested in engineering and technology, and gain more visibility and recognition for the College of Technology in the state, in the nation, and beyond. Nesli is originally from Istanbul, Turkey and moved to the U.S. with her husband in 1994 to pursue her Ph.D. Nesli's husband is also an engineer, mechanical engineer, with MBA and Ph.D. in Engineering Management, and he's here today. They have two sons, one is at Emory University in Atlanta, Georgia, as a sophomore, and the other one is at the University of Miami in Miami, Florida, as a freshman. They are both majoring in science with pre-med track. The Alp family loves to travel and discover new places in the world.

4:00 – 4:20 pm (Wednesday, November 3)



**Aixi Zhou, PhD, PE, FSFPE**

**Chair and Professor, Dept. of Applied Engineering Technology  
College of Science and Technology  
North Carolina A&T State University, Greensboro, NC, USA**

***Title: Equipping Technology Management Students with Advantageous Technical Skills***

Aixi Zhou is Professor and Chair of the Department of Applied Engineering Technology at North Carolina A&T State University (NCAT). In his role, he is leading the department with a mission to prepare students for success in transforming society through innovation and technology leadership. The department offers B.S. degrees in Applied Engineering Technology and Automotive Engineering Technology, M.S. degree in Technology Management, and Ph.D. degree in Applied Science and Technology (Technology Management concentration). The department has experienced considerable growth under Dr. Zhou's leadership. Prior to joining NCAT, Dr. Zhou held positions at the University of North Carolina at Charlotte, Virginia Polytechnic Institute and State University (Virginia Tech), École Polytechnique Fédérale de Lausanne (EPFL), and the University of California at San Diego. He earned his B.S.

degree in Mechanical Engineering from Shenyang Aerospace University, M.S. degree in Mechanical Engineering from Lanzhou University of Technology, and Ph.D. degree in Engineering Mechanics from Virginia Tech. His research interests and publications are in the areas of fire protection, materials and structures, manufacturing, and engineering education. He has been the Principal Investigator (PI) or co-PI for over 20 funded research projects. Dr. Zhou is the author or co-author of more than 100 technical publications and the author of textbooks Applied Engineering Experiments and Advanced Engineering Experiments. He is a Fellow of SFPE. Dr. Zhou is a licensed Professional Engineer. He serves as a Commissioner in the Engineering Accreditation Commission at ABET.



4:20 – 4:40 pm (Wednesday, November 3)



**Shanthi Muthuswamy, Ph.D.**  
 Professor, Department of Engineering Technology  
 Northern Illinois University, De Kalb, IL 60115, USA

***Holistic learning for online and on campus students***

Dr. Shanthi Muthuswamy is a professor in the department of engineering technology at Northern Illinois University. She got her PhD in Industrial and Systems Engineering from Binghamton University, New York. Her area of research is scheduling, heuristic optimization, and process optimization. She has several funded applied research projects spanning a wide range of industries – manufacturing (Caterpillar Inc., Dukane Precast Inc. etc.) to health care providers (Edward-Elmhurst hospitals). Her teaching style is unique and includes a lot of applied engineering perspectives as she worked in the industry before joining the academia and continues to collaborate with corporations on research projects. She is also serving as the vice president of College Industry Council on Material Handling Education (CICMHE).

4:40 – 5:00 pm (Wednesday, November 3)



**Kamal Shahrabi, Ph.D.**  
 President and Dean of Faculty, RIT Kosovo (A.U.K)  
 Rochester Institute of Technology – RIT Global Campus  
 Dr. Shpetim Robaj, n.n., Germia Campus, Prishtina, Kosovo

***Development of Technological Capacity***

Dr. Kamal Shahrabi is the President and Dean of Faculty in RIT Kosovo (A.U.K). In addition, Dr. Shahrabi is currently the Chair of Board of Directors at Association, Technology, Management and Applied Engineering, ATMAE. Prior to his appointment as the Chair of Board of Directors he has served as a member of the Board of Accreditation, representative of four year institutions at ATMAE. Dr. Shahrabi has worked in higher Education for 36 years. Prior to joining RIT Kosovo, Dr. Shahrabi was Dean of the School of Engineering Technology, Professor of Electrical and Computer Engineering Technology, Director of the Renewable Energy and Sustainability Center and Director of Collegiate Science & Technology Entry Program (STEP/CSTEP) at Farmingdale State College.

Before joining Farmingdale State College, Dr. Shahrabi was a Professor, Department Chair and Assistant Chair for 20 years in Kean University. He has published several papers in various areas of Communication, Robot Tracking in Space, and Wireless Communication. Dr. Shahrabi has several years of experience in digital signal processing, space tracking, communication and satellite control systems while doing research at City University of New York for NASA. He has received grants totaling more than \$4.4 million through NSF and the Challenge Grant. His research interests are in the fields of Digital Signal Processing Algorithms, Spread Spectrum, nanotechnology, sustainable energy, and Wireless Communication Systems. He earned his PhD in Electrical Engineering, a Master of Philosophy and a Master of Engineering (Electrical) at CUNY, BS in Electrical Engineering at NJIT.

## Global Engineering Education III

5:00 – 7:00 pm, Wednesday, November 3  
 Session Chair: Dr. Mohd Helmy Abd Wahab

5:00 – 5:20 pm (Wednesday, November 3)



**Felipe Gómez Gallo**  
 President at SPEED  
 Vice President for Student Affairs at IFEEES  
 Trainee, United Nations Institute for Training and Research (UNITAR), Bogota, Colombia

***The Student Voice in Engineering Education: Global Challenges and Best Practices***

Felipe Gómez Gallo, based in Bogotá-Colombia, is a Master's student in Environmental Engineering and holds degrees as an Environmental and Civil Engineer with complementary studies in Biodiversity from Universidad de los Andes. Highly interested in Engineering Education and Sustainability Studies. Knowledge of Sustainable Development Goals (SDG), Engineering Education (EE), and climate change mitigation & adaptation. Experienced leadership with multicultural and multidisciplinary teams with verifiable results. Member of YOUNGO, UNMGCY, Climate Reality Leader, wellbeing ambassador, President of the Student Platform for Engineering Education Development (SPEED), and Vice President for Student Affairs of the International Federation of Engineering Education Societies (IFEEES). Trainee at UNITAR Prosperity Division.

5:20 – 5:40 pm (Wednesday, November 3)



**Dr. Cristian Rusu**  
 Full Professor and Coordinador "UseCV" – Grupo de Investigación en Interacción Persona – Computador/Head of the Research Group in Human-Computer Interaction "UseCV"  
 Escuela de Ingeniería Informática/School of Informatics Engineering  
 Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile

Cristian Rusu is full professor at Pontificia Universidad Católica de Valparaíso (PUCV), in Chile. He is PhD in Applied Informatics from Technical University of Cluj-Napoca (Romania). He worked in several software companies and research institutes in Romania and Chile. Since 1999 he is fully dedicated to academia. He serves in editorial boards and conference program committees and disseminates Usability's importance, in Chile and Latin America. His research interests focus on HCI, Usability, User Experience, and Service Science. Former Chair of the Chilean ACM-SIGCHI Chapter, he is also the head of the "UseCV" Research Group in HCI at PUCV.



5:40 – 6:00 pm (Wednesday, November 3)

**Wiljeana Glover, Ph.D.**

**Steven C. and Carmella R. Kletjian Foundation Distinguished Professor in Global Healthcare Entrepreneurship**  
**Babson College, Boston, MA, USA**

Wiljeana Glover is the Steven C. and Carmella R. Kletjian Foundation Distinguished Professor in Global Healthcare Entrepreneurship and an Associate Professor of Operations and Information Management. She is also the Founding Faculty Director of the Kerry Healey Center for Global Healthcare Entrepreneurship. Professor Glover studies the use of healthcare improvement and innovation practices to achieve more effective, efficient and equitable care via hospitals and health startups. Professor Glover completed her postdoctoral studies at the Sociotechnical Systems Research Center at Massachusetts Institute of Technology (MIT), Ph.D. and M.S. in Industrial and Systems Engineering at Virginia Tech, B.S. in Industrial and Systems Engineering at Georgia Tech,

and B.A. in Mathematics at Albany State University (GA). Prior to her academic career, she worked as a consultant with Stockamp and Associates, implementing revenue cycle and process improvements in hospital settings

6:00 – 6:20 pm (Wednesday, November 3)

**Prof. Dr. Nor Hasni Osman**

**Professor and Dean, School of Technology Management and Logistics**  
**College of Business, Universiti Utara Malaysia, Sintok, Kedah, Malaysia**

Title: ***Synergizing science and arts in nurturing the future***

Nor Hasni Osman is a Professor in Operations Management at Universiti Utara Malaysia. Currently, she is a Dean for School of Technology Management and Logistics. Her school offers three undergraduate programs (i.e.: Technology Management, Operations Management, and Logistics & Transportation Management), three postgraduate programs by research and soon will launch three master's program by coursework. She has leads a few transformational planning program for government agencies. Currently, she is a lead consultant for one state industrial plan for 2020-2025. She is working closely with marine parks throughout Malaysia focusing in economic valuation and measuring management effectiveness of the Marine Park Area (MPA). The issue of sustainability, conservation and community co-management is one of her many best research interests. She and her research

team members currently engaging with Fishery Research Institute (FRI) and Department of Fishery (DoF) for research based project at Payar Island and Tioman Island. Her research team also doing a case study research for KXP Airport, a new setup airport in Kedah State where her university located. She is supervising postgraduate students using management and quality tools (such as Balanced Score Card and Business Process Reengineering), with parametric and non-parametric statistics either quantitative or qualitative approach. Nor Hasni graduated in Statistics from Universiti Kebangsaan Malaysia (UKM), received an MBA from Ohio University, and a PhD holder in Quality and Productivity Improvement program from UKM.

6:20 – 6:40 pm (Wednesday, November 3)

**Mohd Helmy Abd Wahab, SMIEEE, MPECAMP, MIAEng, MIACSIT**

**Senior Lecturer & Academic Advisor, Department of Computer Engineering**  
**Faculty of Electrical and Electronic Engineering**  
**Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia**

Mohd Helmy Abd Wahab is a senior lecturer and former Head of Intelligent System Lab at the Department of Computer Engineering, Faculty of Electrical and Electronic Engineering, Universiti Tun Hussein Onn Malaysia (UTHM). He has actively involved in many academic activities such as being invited speaker at ICRITO 2015 (India), IPIARTI 2015 (UTP), IPIARTI2014 (UNIMAP) and IPIARTI 2012 (UiTM). He hold several research grants, won several medals in research and innovation showcases and awarded several publication award and teaching awards. He has authored and co-authored 2 books in database system (2013) and this book received consolation prize by Society of Science and Mathematics Malaysia (PESAMA) in 2014 and WAP application (2009), published

several both local and international book chapters (11), technical papers in conferences and peer-reviewed journals (>100) papers. He also involve in publishing articles in periodicals such as newspaper (Utusan Malaysia) and national magazine (Dewan Kosmik). He also served as guest editor for Special Issue in Wireless and Mobile Networks in International Journal of Advanced Computer Science and Applications (2011) and as Deputy Editor in Chief for Int. Journal of Software Engineering and Computing since 2009 and scholarly contributed as committee for conferences, editorial team and manuscript reviewers and also invited to be session chair in conferences. Latest, he also invited to be Advisory Committee for ICACM 2016 at Pune, India, and Track Chair for IEOM 2016 in Kuala Lumpur. His research interests are in data mining, artificial intelligence and computer vision, mobile and wireless computing, web-based applications. He is currently an active member of IEEE, IEEE Computer Society, IAEng, IACSIT and PECAMP (Society of Info. Retrieval and Knowledge Management Malaysia) and as Associate Member for Embedded Computing Research Group (UTHM), BigData Center (UTM), MySigBigData (UM), E-Community Research Center (UKM).

6:40 – 7:00 pm (Wednesday, November 3)

**Dr. Md. Mizanur Rahman, PhD CEng Chartered Energy Engineer MEngNZ Member ASME**

**Senior Lecturer, School of Mechanical Engineering**  
**University Technology Malaysia (UTM), Johor Bahru, Malaysia**

***21st century energy engineering education: paradigm shift from technology-centred to multidisciplinary focused***

Md Mizanur Rahman is currently a Senior Lecturer at Department of Thermo-Fluids, School of Mechanical Engineering, Universiti Teknologi Malaysia (UTM), Johor Bahru, Malaysia. Before joining at UTM, he has served as a Postdoctoral Researcher at Aalto University School of Engineering, Finland. He received his Ph.D. in Mechanical Engineering, under the research field of Energy Economics and Power plant Engineering from Aalto University, Finland. He received an M.Sc. in Sustainable Energy Engineering from Royal Institute of Technology KTH, Sweden, and a B.Sc. in Mechanical Engineering from Khulna University of Engineering and Technology, Bangladesh. His research interests include thermodynamics, energy economics, energy management, energy efficiency and system, sustainable and renewable energy, energy system modelling, Life-Cycle Analysis, distributed

power generation, multicriteria evaluation etc. He has several publications in International referred journals in energy engineering domain. He also has quite a long (13 years) working experiences in the industry, laboratory, and training institute. He has published several scientific publications in the international refereed journals in energy engineering domain. He is a Certified Energy Manager.

## 26<sup>th</sup> Industry Solutions and Industry 4.0 - Distinguished Speakers

### Thursday, November 4, 2021

#### Industry Solutions – I

1:00 – 3:00 pm, Thursday, November 4

Session Chair:

1:00 – 1:20 (Thursday, November 4)



#### **Pawan Bhandari**

Principal Health Systems Engineer, Strategy Department  
Mayo Clinic, Rochester, Minnesota, USA

#### ***A Demo: Supervised Machine Learning Application to solve real world opportunities in healthcare***

**Pawan Bhandari, MS** is a Principal Health Systems Engineer with Mayo Clinic's Strategy department based out of Mayo Clinic Health System, Southwest Minnesota Region where he provides business consultative and management engineering services. He is also an Instructor in Health Care Systems Engineering, College of Medicine, Mayo Clinic, Rochester and an adjunct faculty in the College of Science, Engineering, and Technology at Minnesota State University, Mankato, Minnesota. He is an ASQ Certified Six Sigma Black Belt, ASQ Certified Quality Improvement Associate, Prosci Change Management Practitioner and Mayo Gold Quality Fellow. His research interests are in healthcare quality and process improvement, strategy design, development & implementation, technology management, quality systems, business analytics, machine learning, and data science. He is a member of American Society for Quality (ASQ), Industrial Engineering and Operations Management (IEOM) society, and the Association of Technology, Management, and Applied Engineering (ATMAE).

1:20 – 1:40 (Thursday, November 4)



#### **Kush Shah**

Senior Manager, Operational Excellence (Retired)  
General Motors, Michigan, USA

Kush Shah is globally recognized for his expertise, professionalism, and outstanding contributions to the field of quality. He has a proven track record for solving tough quality problems. He has demonstrated his unwavering dedication in advancement of organizational excellence by introducing quality concepts for many organizations and individuals that resulted in a significant improvement in performance and customer experience. He received Subir Chowdhury Medal of Quality Leadership – Society of Automotive Engineers (SAE) and Gold Award from Society of Detroit.

Kush was with General Motors for over 37 years and his last position was Senior Manager, Operational Excellence with responsibilities of coaching and training top leadership to front line employees in continuous improvement methodologies globally. Completed Operational Excellence projects have impact of over \$1 Billion globally. He has held leadership positions in manufacturing, ME, R&D and quality functions. Kush has received the Chairman's Honor Award, People Make Quality Happen Award, Quality Driver Award and GM Trade Secret Award.

He has served in many leadership positions at the American Society Quality (ASQ) including Director on the ASQ Board of Directors, the Chair of Automotive Division and the Chair of Detroit Section. He has received the Distinguished Service Award from Detroit Section along with the Koth Award and Jarvis Award from the Automotive Division for his leadership and contribution to these organizations. He also received the ASQ Testimonial Award for his outstanding leadership and distinguished service to the Society. Kush was recognized as an ASQ Fellow. He was selected to participate in the development of the first ASQ Certified 6 Sigma MBB exam and currently is Chair of ASQ Six Sigma Black Belt Certification.

Kush is a preeminent quality professional who has applied his expertise to advance innovative application of quality systems and methodologies to diverse audiences as a mentor, teacher and speaker. He has trained thousands of individuals at all levels of organizations across a variety of businesses globally. He has been speaker at many global conferences. His contribution to improve healthcare quality has been featured in the Detroit Free Press. Kush is Six Sigma Master Black Belt, Design for Six Sigma Master Black Belt, Shainin Red X Master and Design Thinking coach. He also has received ASQ certifications – CMQ/OE, CQE, CSSBB, CQA, CBA. He has Master of Science in Mechanical Engineering from the University of Michigan – Ann Arbor.

1:40 – 2:00 (Thursday, November 4)



#### **Dr. Alister McLeod**

Associate Professor  
Applied Engineering and Technology Management  
College of Technology  
Indiana State University  
Terre Haute, Indiana, USA

Alister McLeod holds a doctorate degree in Industrial Technology and a master's of science degree in Electronics Technology from Purdue University. Dr. McLeod is an Associate Professor of the Manufacturing Engineering Technology Program in the department of Applied Engineering Technology Management at Indiana State University. As an Industrial Technologist, Dr. McLeod's research interests lie in the adoption of productivity improvement techniques and machinery in small to medium size manufacturers. Their impact on the social fabric of work environments and communities are of particular interest. Currently, Dr. McLeod's work centers on how Machine Learning is being to improve production systems. The adoption of this new technology in production environments promises to have a profound impact the social dynamics currently at play in the labor force and this makes fertile ground for sociotechnical research.

2:00 – 2:20 (Thursday, November 4)

**Christopher Kluse, PhD, CMQ/OE**

Associate Professor, Quality Systems, eCampus Program Coordinator, Quality Systems  
College of Technology, Architecture & Applied Engineering, Bowling Green State University, Ohio, USA

***The Future of Quality; A need for change to the 3rd party audit system***

Christopher Kluse, Ph.D., is an associate professor of Quality Systems in the Department of Engineering Technologies at Bowling Green State University. Christopher earned his PhD in Technology Management with a specialization in Quality Systems from Eastern Michigan University in 2012. Christopher has over 25 years of industrial experience in quality systems with most of the time spent in the automotive sector as a quality and manufacturing professional. Additionally, Christopher is an ASQ Certified Manager of Quality/Organizational Excellence and has published multiple articles focusing on quality systems, lean manufacturing, and competency-based education.

2:20 – 2:40 (Thursday, November 4)

**Dr Boitumelo Ramatsetse**

Lecturer: Engineering Graphics and Design (EGD)  
Educational Information and Engineering Technology (EDIET)  
Wits School of Education, University of the Witwatersrand, Johannesburg, South Africa

***Modelling complex industrial products and systems through the application of reconfigurable manufacturing system thinking***

Dr. Boitumelo Ramatsetse is Lecturer & Researcher in the Educational Information & Engineering Technology (EDIET), School of Education, University of the Witwatersrand, as well as a Research & Innovation (RnI) Associate at the Faculty of Engineering & the Built Environment (FEBE), Tshwane University of Technology (TUT) in South Africa. He has over 9 years of teaching experience in Higher Education sector. He holds a Doctor of Engineering, Master of Technology degree in Industrial Engineering, Bachelor of Technology and National Diploma in Mechanical Engineering from TUT. He is an associate member of Southern African Institute of Industrial Engineers (SAIIE), member of Southern African Institute of Mechanical Engineers (SAIMechE) as well as Industrial Engineering and Operations Management (IEOM). He has served at the National Research Foundation funding committee for the year 2017 and he is amongst the 2021 Mail & Guardian most influential 200 Young South Africans. He has published 12 journal papers, 1 book chapter and over 20 local and international conference papers. To date, he has successfully filed 3 patents in South Africa and China. Through his efforts, he has attracted over R630 000 worth of seed-funding and received numerous awards which includes the Finalist 2020/2021 NSTF-South32 TW-Kambule Emerging Researcher award, Finalist GAP Innovation Competition 2020, The Most Efficient PhD Student 2019, Winner Intellectual Property Competition 2020, Finalist for the Standard Bank Rising Star Awards 2017, Best poster award IEOM conference 2018, Gibela Research Chair Contribution Award 2018, National Intellectual Property Management Office (NIPMO) Patent Award 2017, Highest number of publications award 2016, etc.

2:20 – 2:40 (Thursday, November 4)

**Alan Beltrán**

Head of Plant Industrial Engineering  
VNI CCN O AGC IE  
Plant Aguascalientes  
Vehicle Networking and Information (VNI)  
Continental Automotive  
Aguascalientes, Ags., Mexico

**Industry Solutions II**

3:00 – 4:40 pm, Thursday, November 4

Session Chair:

3:00 – 3:45 (Thursday, November 4)

**Foad H Khanli**

Director of Quality Assurance, Performance and Business Improvement  
Amor Health Services, Inc., Brownsville, Texas, USA

***Lean Six Sigma Black Belt Project – Reduction in Clients/Customers Lost, Improve Quality of Service and Clients Care***

Mr. Hosseinkhanli is Director of Quality Assurance, Performance and Business Improvement Amor Health Services, Inc. in Brownsville Texas USA. He was General Manager of Almana Trading in Doha Qatar Middle East and responsible for all aspects in creation and implementing of successful growth of new market development and turn-key operation for various products. Mr. Hosseinkhanli was involved with financial negotiation with national and international banking, corporation, private sources and trading organization. Volvo International Development Corporation, Gothenburg Sweden, Marketing Director For The Middle Eastern Countries, UAE, Saudi Arabia, Bahrain, Turkey and Iran. Negotiated and established exclusive franchise agreement and turn- key operation. Did market analysis and feasibility studies for Volvo International in the Middle Eastern countries and increase annual sales in excess of 55%. Chief Industrial Engineer, United Carr, manufacturer of plastic knobs for Automotive Industries, Knoxville Tennessee USA. His education background is: Master of Business Administration from IMMEDE Management Institute in Lausanne Switzerland majoring in financing. Bachelor of Science in Industrial and System Engineering from University of Rhode Island in Kingston Rhode Island USA. Certified Business Analyst from International profit Association in Buffalo Grove IL USA. Certified Six Sigma Green and Black Belt from Institute of Industrial Engineers. Extra Curriculum Activity: Senior Member of Institute of Industrial Engineers, Senior Member of ASQ and Senior Member of Swedish Method and Time Measurement Language: Fluent in English, Swedish, German, Turkish, Farsi and some Spanish.

3:45 – 4:00 (Thursday, November 4)



**Rachel Yager, Ph.D.**

**Founder & CEO, FortuneTimes Group (FTG), Head of WeblInnovation® Think Tank**  
**Head of W3C New York Metro Chapter, President of Friends of NTU (FNTU) USA, New York City, NY, USA**

Dr. Rachel Yager founded FortuneTimes Group (FTG) New York management consultancy, which accelerates international business growth with state-of-the-art business techniques, emerging technologies, and global best practices in Big Data analytics and Machine Intelligence. During the COVID19 lockdown in 2020, she launched the W3C NY Metro Chapter with the World Wide Web Consortium (W3C) and the Massachusetts Institute of Technology (MIT). Dr. Yager works on mitigating the pandemic impact on the NYC communities in business, investment, technology, and education. Her vision of the WeblInnovationX, a Global Think Tank in Business R&D, provides a platform for studying the World Wide Web's societal & economic impacts with open innovation. Dr. Yager earned her Ph.D. in Industrial Automation and AI Robotics, funded by the French Institute for Research in Computer Science and

Automation (INRIA). In addition, she has a Bachelor's Degree in Electrical and Electronic Engineering from NTU. She is currently the President of the Friends of NTU (FNTU), a non-profit organization that promotes USA Singapore Global Research and Education.

3:00 – 3:20 (Thursday, November 4)

**Jesus Velasquez**

**Mathematical Programming Entrepreneur & Researcher**  
**Chief Scientist**  
**Do Analytics LLC**  
**Bogota, Colombia**

3:20 – 3:40 (Thursday, November 4)

**Ana Lucia Arango Montoya**

**Senior Project Management**  
**Ceiba Software**  
**Medellín, Antioquia, Colombia**

***Agile principles for supply chain in the textile industry***

Ana Lucia Arango is an industrial engineer with a master's degree in mathematics and Statistics. With fifteen years of experience in several industries like food, personal care, real estate and textile. Scrum Master, with a lot of passion in improvements and transformations of processes and teams to achieve their goals.

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**Industry Solutions III**

**5:00 – 6:40 pm, Thursday, November 4**  
**Session Chair:**

5:00 – 5:20 (Thursday, November 4)

**Aaron Rubel, M.S.E.M.**

**Head of Aircraft Maintenance Programs Development, Intellectual Property Focal Point**  
**Airbus Americas, Inc., Mobile, Alabama Engineering Center, Mobile, AL 36615, USA**

**ID 471 An Introduction of Aircraft Maintenance Programs Engineering Inputs to Scheduled Maintenance Operations**

Aaron Rubel is Head of Aircraft Maintenance Programs Development at the Mobile, Alabama Engineering Center of Airbus Americas. He is a certified Lean Six Sigma Black Belt and has earned patented inventions. Aaron has over 30 years of combined professional aerospace and automotive experience in areas of engineering, design, risk analysis, problem solving, manufacturing, and leadership. Mr. Rubel earned a M.S. in Engineering Management from the University of Tennessee at Chattanooga (UTC), a B.S. in Engineering Technology from Lawrence Technological University (LTU), and an Associate of Applied Science from Macomb Community College. Mr. Rubel's honors include the Dr. Ron Cox Graduate Engineering Management Student Award given by UTC, and he

was inducted into the LTU College of Engineering Hall of Fame. Service in the community is important to Aaron. He served on a Mobile (Alabama) Area Education Foundation strategic planning committee for science, technology, engineering, and mathematics (STEM), and for three years was the strategic planning committee chair and voting member on a local school board.

5:20 – 5:40 (Thursday, November 4)





**Juan Carlos Martínez-Ovando, PhD**  
Chapter Lead in Data & Analytics  
Grupo Rotoplas, Mexico City, Mexico

Juan Carlos Martínez Ovando currently works as an Analytics (AI/ML) Officer at Grupo Rotoplas Digital division, after assuming different roles in the corporate IT team. Juan Carlos's current interests include the development of advanced analytics solutions and the design of the analytics strategy for the group in alignment to Industry 4.0, smart-water services, master data management and digital e-commerce corporate initiatives of Grupo Rotoplas. Previously, he was Professor of Analytics and Intelligence at Tecnológico de Monterrey Business School, Associate Professor at ITAM in the Actuarial Science and Data Science programmes and at Banco de México Economic Research Division, where he conducted several applied and methodological studies around macro- and micro-econometrics. Juan Carlos' has also taught graduate and undergraduate courses at different institutions, including UNAM, U. Anahuac-Mexico, The University of Kent, ITAM and Tec de Monterrey. He holds a B.Sc. degree in Actuarial Science from ITAM, a M.Sc. degree in Statistics from UNAM, and a Ph.D. in Statistics from the University

of Kent at Canterbury. He also completed postdoctoral studies in Bayesian Econometrics at the University of Torino and Collegio Carlo Alberto (Italy). He is also interested in the following academic research topics: Bayesian Statistics and its applications, deep-learning methods, edge analytics, nonparametric methods of inference, prediction of complex dynamic systems, probabilistic graphical models, natural language processing and behavioural analytics. His research has been distinguished with the "Premio Francisco Aranda Ordaz", granted by Asociación Mexicana de Estadística (AME) and the "Leonard J. Savage Award", granted by ISBA-NSF-ASA. Juan Carlos has also served as a consultant for different institutions, including the European Central Bank, United Nations, and the World Bank.

3:40 – 6:00 (Thursday, November 4)



**Dr. Noor Farizah Ibrahim**  
Senior Lecturer, School of Computer Sciences  
Universiti Sains Malaysia  
Pulau Pinang, Malaysia

#### ***Forecasting and Optimisation of Warehouse Shipment Demand***

Noor Farizah Ibrahim is a Senior Lecturer at the School of Computer Science, Universiti Sains Malaysia after receiving her PhD from the University of Bristol, United Kingdom. She is also a certified tester of the International Software Testing Qualifications Board (ISTQB) and a Huawei Certified ICT Associate and Academy Instructor in Artificial Intelligence (AI). Her research interests include data/text analytics, natural language processing, machine learning, and social media research. Her research has been published in Computers in Human Behavior, Decision Support

Systems, World Academy of Science, Engineering and Technology, International Journal of Business and Economics Engineering, the Proceedings of the 11th European Conference on Information Systems Management, and the Proceedings of the 12th International Conference in Web Information Systems and Technologies. One of her research papers is featured in an online business news article and blog: "4 Things That Predict Customer Sentiment After Online Interactions with Brands in Business to Community". She has won the Best Paper Award in Data Analytics for a paper titled "Historical Hashtags: A Tweet Investigation #CometLanding" at the International Symposium on Industrial Engineering and Operations Management (IEOM), United Kingdom. She is currently working under several national grants and university projects (e.g. AI Governance and Data Analytics Group).

6:00 – 6:20 (Thursday, November 4)



**Dr. Ihfasuziella Ibrahim, (CREAM, CIDB)**  
Researcher, Construction Research Institute of Malaysia (CREAM)  
CREAM is a research institute established under the Construction Industry Development Board (CIDB)  
Kuala Lumpur, Malaysia

Ihfasuziella Ibrahim is a Researcher at Construction Research Institute of Malaysia (CREAM). CREAM is a research institute established under the Construction Industry Development Board (CIDB), which she joined in February 2013. Ihfasuziella start her career after completing a Bachelor Science in Real Estate Management with Honors from UTHM, Johor in 2009. Upon completing her studies, she has been a research assistant in University Tun Hussein Onn Malaysia (UTHM) in 2010 under the Technology Management & Business Faculty. Due to high enthusiasm and encouragement for continuing studies, Ihfasuziella have been offered a place at University Tun Hussein Onn Malaysia entering master's level on Science in Property and Facilities Management in 2010. The title of her thesis is "Development of Space Charging Model in Malaysian Higher Education Institutions. The title of PhD thesis is Development of Shopping Centre Classification Model using Analytical Hierarchy Process (AHP) at MARA University of Technology (UiTM) under Faculty of Architecture, Planning and Surveying. She is also member in Malaysian Association of Facilities Management (MAFM). Her research interests are currently in the areas of facilities management, property management, performance management, construction management and Industrialised Building System (IBS). She was published papers in the local and international conference, seminars, journals, articles, and chapter in books. She was involved with the development of a module entitled Technology and Innovation in Facility Management (SMT15103) in 2016 for Open University Malaysia (Msc Program) and Facilities Management module for CIDB. She also involved in book publishing entitled Facilities Management Initiatives and Empowerment for Construction Industry in Malaysia in 2021 and Construction Law Report for Edition 2019 until 2021.

6:20 – 6:40 (Thursday, November 4)



**Dr. Patricia Eugenia Sortillón González**  
Industrial Engineering Professor  
Universidad de Sonora  
Hermosillo, Sonora, Mexico

6:40 – 7:00 (Thursday, November 4)



**Bob Doering, MBA**

Quality Engineering Professional

Expert in CorrectSPC for Precision Machining – Trainer, Consultant

Lagrange, Ohio

USA

***Use of AI to Advance the Quality and Flexibility of Video Training***

Bob Doering has been in the quality field for over 20 years. He is currently a quality engineer for an automotive component manufacturing firm, as well as a consultant in SPC, Metrology and Quality Concepts training. He holds associates degrees from Lorain County Community College of Elyria, Ohio and The University of Akron of Akron, Ohio; BA in Business and MBA in Systems Management from Baldwin-Wallace College, Berea, Ohio.

## 6<sup>th</sup> IEOM Global Supply Chain and Logistics Distinguished Speakers

### Thursday, November 5, 2021

#### Global Supply Chain and Logistics – I

1:00 – 2:40 pm, Friday, November 5

Session Chair: Dr. Asela Kulatunga

1:00 – 1:20 (Friday, November 5)



#### **Sadique Salim**

**Design Thinking Expert, CMBB, PMP**

**Vice President, Bangladesh, Dr. Mikel J Harry Six Sigma Management Institute Inc. Dhaka, Bangladesh**

**Transformer, facilitator, connector, problem solver**

Sadique Salim is one of the well-known resources in the field of Lean Six Sigma, Design Thinking, Innovation, Start UP acceleration and Business Excellence in the South Asia. He is known for transforming organization with little or limited resources. Sadique is one of the first Design Thinking, Six Sigma experts in his home country. He has been practicing Six Sigma in his work and as a consultant for last 16 years and helped set it up for many organizations. He is featured frequently as a guest speaker in ACCA Asia programs, universities, seminars where he talks about Design Thinking, Six Sigma, Operational Excellence, Business Transformation and Data Science. Sadique is a Certified Lean

Six Sigma Master Black from Six Sigma Management Institute. He is also a Certified Project Management Professional for last 10 years from Project Management International, USA. He also received certification on Design Thinking from AHO (The Oslo School of Architecture and Design, Norway) and Designing Better Services from Telenor Academy- Pebble Road (Thailand). Since 2014, Sadique has guided over 50+ organizations, both manufacturing and services across ten countries in their Organizational Excellence journey, Design Thinking implementation, TQM and Six Sigma implementation and known for his avid skills in successful Business Transformation and Change Management. He is also a frequent pro bono consultant for local start-ups and plays an active role in raising funds and investments for them. He also represents some global venture capitalist organizations in Bangladesh.

1:20 – 1:40 (Friday, November 5)



#### **Prof. Prabhat Mittal**

**Professor, Department of Commerce & Management**

**Satyawati College (Eve.)**

**University of Delhi, India**

Prabhat Mittal is a Professor in the Department of Commerce & Management, at Satyawati College (Eve.), University of Delhi (India). He holds a doctoral degree from the Faculty of Management Studies (FMS), University of Delhi, and has published many research articles in the fields of supply chain management, quantitative finance, and big data analytics. He was a postdoctoral fellow at the Department of Industrial and Systems Engineering, University of Minnesota (USA). He has also been an associate fellow of Indian Institute of Advanced Studies (IIAS), Shimla. His current research interests include big data, public administration, healthcare supply chain, econometric

modeling and high frequency data. He has recently completed projects on "Impact Evaluation of Mukhya Mantri Adarsh Gram Yojana, sponsored by Government of Himachal Pradesh and "Study on Police Accountability, Motivation and Control", Sponsored by Bureau of Police Research & Development (BPR & D). He is consultant in the ongoing project on "Evaluation of Watershed Programme " of Government of Himachal Pradesh, India. He has delivered lectures in more than hundred workshops/FDP/conference programs on data management and analysis tools using R, SAS, SPSS, EViews, AMOS, SmartPLS. He has authored forty research articles in national and international journals and also presented a number of papers in national and international conferences at IISC Bangalore, IIM Bangalore, NTU Singapore, University of Economics Vietnam, University of Bahrain, University of Kelaniya Sri Lanka, University of Minnesota, Las Vegas (USA).

1:40 – 2:00 (Friday, November 5)



#### **Mr. José Carlos Hernández González**

**Investigador Asociado**

**Logística TIEC**

**Villahermosa, Tabasco, Mexico**

#### **Artificial Intelligence in agro supply chain management: opportunities to green coffee in Mexico**

Mr. Hernández-González is part of the Advanced Technology Center, CIATEQ A.C. at the Tabasco campus in Mexico, working on logistics and supply chain projects as an associate researcher.

He is an Industrial Engineer with a specialization in manufacturing and reliability. He received his master's degree in Industrial Engineering from the Technological Institute of Orizaba with a specialization in Decision Analysis System, where he develops artificial intelligence applications to improve the processes of the agricultural supply chain.

During his academic and professional training, he has participated in projects about technological innovation, applied research and services with the industry. Today, Mr. Hernandez-Gonzalez is an accredited person in decision quality, and he is certified by the Mexican Association of Logistics and Supply Chain A.C. Mr. Hernández-González has contributed to several publications in Journals, participation in seminars and international conferences such as the International Congress on Logistics and Supply Chain (CILOG). He is a reviewer of articles from different conferences in Mexico and teaches about logistics and simulation in Systems Dynamics. His research interests include decision analysis, logistics and supply chain, simulation paradigms, and artificial intelligence.

2:00 – 2:20 (Friday, November 5)



**Dr. Ahm Shamsuzzoha**  
Tenure track professor  
University of Vaasa  
Finland

Dr. Ahm Shamsuzzoha received his Master's degree in Mechanical Engineering, majoring Energy and Environment from University of Strathclyde, UK and Ph.D. in Industrial Management from the University of Vaasa (UVA), Finland. He also received his Teacher's Pedagogical Qualification (Professional Teacher Education) from Tampere University of Applied Sciences, Finland in 2019. Ahm Shamsuzzoha is working as a Tenure Track Professor, Industrial Systems Analytics, School of Technology and Innovations, University of Vaasa and in the research platform Digital Economy. He has been involved in a leading position in a number of European Union projects and nationally funded projects in Finland. He is currently also involved in several ongoing projects both in European Union level and local projects in Finland. His research interests are mainly focused on supply chain and logistics management, entrepreneurship, innovation management, blockchain, space data, sustainable energy and environment.

2:20 – 2:40 (Friday, November 5)



**Dr. Asela Kulatunga**  
Senior Lecturer, Department of Manufacturing & Industrial Engineering  
Faculty of Engineering  
University of Peradeniya, Sri Lanka

Dr. Asela Kulatunga is a senior lecturer in the Department of Manufacturing & Industrial Engineering at the Faculty of Engineering, University of Peradeniya, Sri Lanka. He earned Bachelors in Production Engineering from University of Peradeniya, Sri Lanka, and Ph.D. in Mechanical/ Industrial Engineering from University of Technology, Sydney, Australia and gLink Erasmus Mundus Research Fellowship at University of Bremen Germany. He has published several books/book chapters, and more than seventy journal and conference papers. Dr. Kulatunga has served in many local and international forums which include the ministry of Environment Sri Lanka, UNEP LCA initiative, UNIDONCPC projects. His research interests include lean and sustainable manufacturing, Industrial Engineering.

He is the country representative for IEOM in Sri Lanka. He also holds memberships at IIE, IEEE, ERSCP, and IESL.

## Global Supply Chain and Logistics – II

3:00 – 4:40 pm, Friday, November 5

Session Chair: Dr. Marco Augusto Miranda Ackerman

3:00 – 3:20 (Friday, November 5)



**Ignacio Laiton Poveda**  
Docente Investigador  
Escuela Tecnológica Instituto Técnico Central  
Bogotá, Colombia

Bachelor of Physics National Pedagogical University, Bogotá, Colombia. Specialist in Sciences, Physics, National University of Colombia. Master in Education, Universidad de la Salle, Bogotá, Colombia. Doctor of Education, Cum Laude thesis, University of Granada, Spain. Teacher of all educational levels throughout 28 years of experience. During the last twelve years dedicated to university teaching and the last ten to research on the **teaching of thought skills through basic sciences in Engineering**, developing several research projects in this line. These researches have been exposed in different scenarios and congresses among which congresses on engineering education in Havana, Cuba, Orlando and Boston, United States, Bilbao, Spain, Munich, Germany, Valencia, Spain, Leuven, Belgium, Bucaramanga and Bogotá

stand out, Colombia. The current trends in teaching for the 21st century in relation to thinking skills in the context of basic sciences in Engineering, are the basis for the talk on *"New trends in the teaching-learning process of basic sciences for engineering"*, where it is intended to address topics such as "Thought Routines", "Collaborative Learning", "Visible Learning", "Visible Thinking" among others, innovative trends that also involve the evaluation of students.

3:20 – 3:40 (Friday, November 5)



**Robert Simonis**  
Lean Expert and Consultant  
KCE Consulting LLC  
Troy, Michigan, USA

Proposed title of talk: **Creating Flow in Logistics: VMI warehouse to JIT delivery in Monterrey**

Robert Simonis is a lean expert and consultant at KCE Consulting LLC. He has over twenty-five years of leadership experience including ten years in manufacturing management and ten years of global responsibilities in automotive, electronics, machining, logistics, and complex assembly operations. Robert has shared his passion for Lean and has facilitated over 120 workshops and conducted Kaizen in more than 15 countries.

3:40 – 4:00 (Friday, November 5)





**Justin T. Smith**  
PhD candidate in Management Science  
University of North Texas, USA

***Maintaining Value Co-Creation in Education Supply Chains during Disruptions through System Resilience Optimization***

Justin T. Smith is a PhD candidate in Management Science at the University of North Texas. He received his M.S. in international financial management from the University of Maryland in 2015. His research interests include optimization in complex and adaptive systems, network resiliency and strategic investments. Mr. Smith is completing his dissertation on service supply chain resiliency. He has written research on the role of education in cybersecurity specialization. He has also presented research on the effect of economic elasticity on social resiliency and the role of state conditioning in Markov-Chain analysis on stochastic utility optimization. Mr. Smith began his career as an intelligence analyst and Persian linguist in the United States Air Force. During this time, he supported both Operation Iraq and Enduring Freedom where he was awarded 2 letters of commendation, a meritorious service medal and was named Junior Technician of the year in 2004. Mr. Smith was the youngest serviceman to be certified subject matter expert and was appointed lead trainer in his unit. He then transitioned to economic and financial analysis where his team was awarded the meritorious unit citation for their continued success in monitoring the global financial crisis. He has experience collaborating and teaching in international communities and evaluating long-term impacts of disruptive events.

4:00 – 4:20 (Friday, November 5)



**Dr. Helena Carvalho**  
Assistant Professor, Department of Mechanical and Industrial Engineering  
NOVA School of Science and Technology  
NOVA University Lisbon, Caparica, Portugal

Helena Carvalho holds a PhD in Industrial Engineering from NOVA SST. She is Assistant Professor in the Department of Mechanical and Industrial Engineering at the NOVA SST - Portugal and Vice-President in UNIDEMI (Unidade de Investigação e Desenvolvimento em Engenharia Mecânica e Industrial). She published more than 40 articles in journals on the topic of the supply chain, sustainability, lean, green, agile and resilient systems. She participates as a Researcher in 7 projects. She also participate in the evaluation committee of PHD grants and national projects. In their professional activities interacted with 90 collaborators co-authorship of scientific papers.

4:20 – 4:40 (Friday, November 5)



**Dr. Eugenia Suarez Moran**  
Research Professor  
Universidad Panamericana  
Zapopan, Jalisco, Mexico

## Global Supply Chain and Logistics – III

5:00 – 6:40 pm, Friday, November 5

Session Chair: Dr. Satish Vadlamani

5:00 – 5:20 (Friday, November 5)



**Dr. Diego Alberto Oliva**  
Associate Professor  
Universidad de Guadalajara, CUCEI  
Guadalajara y alrededores, México

***Metaheuristic Algorithms: Open Challenges in Engineering***

Diego Oliva received the B.S. degree in Electronics and Computer Engineering from the Industrial Technical Education Center (CETI) of Guadalajara, Mexico in 2007, the M.Sc. degree in Electronic Engineering and Computer Sciences from the University of Guadalajara, Mexico in 2010. He obtained a Ph. D. in Informatics in 2015 from the Universidad Complutense de Madrid. Currently, he is an Associate Professor at the University of Guadalajara in Mexico. In 2017 he has been visiting professor at the Tomsk Polytechnic University in Russia. He has the distinction of National Researcher Rank 2 by the Mexican Council of Science and Technology. Since 2017 he is a member of the IEEE. Diego Oliva is co-author of more than 100 papers in international journals and 5 books. He is part of the editorial board of IEEE Access, Plos One, Mathematical Problems in Engineering, and IEEE Latin America Transactions. His research interest includes Evolutionary and swarm algorithms, hybridization of evolutionary and swarm algorithms, and Computational intelligence.

5:20 – 5:40 (Friday, November 5)



**Dr. Satish Vadlamani**  
**Sr. Mgr. Supply Chain Analytics**  
**Kenco Group, Chattanooga, Tennessee, USA**

Satish Vadlamani is a Sr. Mgr. Supply Chain Analytics at Kenco Group, Chattanooga, TN, USA. He earned B.Tech. in Electronics and Communications Engineering, India. A Masters and Ph.D. in Industrial and Systems Engineering from Mississippi State University, USA. Before joining Kenco, Dr. Vadlamani worked at other global supply chain companies like APPL and XPO. Dr. Vadlamani has passion for applying operations research, machine learning (ML) and artificial (AI) intelligence to solve complex supply chain problems. Dr. Vadlamani has seven years of experience applying ML and AI for problem solving. Dr. Vadlamani has published at multiple journals and conferences and teaches data science and analytics to people around the globe. His research interests include networks, wireless sensor networks, wireless ad-hoc networks, supply chain networks, network interdiction, location problems, transportation, and meta-heuristics. Dr. Vadlamani has been an invited speaker at various colleges, universities, and other professional organizations across the globe. He is a member of IEOM, INFORMS and IISE.

5:40 – 6:00 (Friday, November 5)



**Associate Prof. Dr. Raja Zuraidah Raja Mohd Rasi (PhD)**  
**Associate Professor in Supply Chain Management, Department of Production and Operations Management, Director, Marketing and Corporate Communication Office**  
**Universiti Tun Hussein Onn Malaysia (UTHM), Batu Pahat, Johor, Malaysia**

Raja Zuraidah Rasi is the Associate Professor in Supply Chain Management, in the Department of Production and Operations Management, Universiti Tun Hussein Onn Malaysia. She is currently a Director of Corporate Marketing and Communication Office at her university. Dr. Raja Zuraidah holds a PhD in Industrial Management from Swinburne University of Technology, Melbourne, Australia. Her research interests include sustainable supply chain, sustainability and operations performance. Her more recent work has been on the application of the blockchain technology in supply chain, and improving operations process through concepts such as root cause analysis, critical chains and lean systems.

6:00 – 6:20 (Friday, November 5)



**Ferry Jie, CMILT, PhD**  
**Associate Professor, School of Business and Law**  
**Discipline of Business Systems and Operations**  
**Edith Cowan University, Joondalup WA 6027, Australia**

Presentation title: **Global Supply Chain Management: Future Research Opportunities**

Ferry Jie is the Associate Professor in Supply Chain and Logistics Management, in the School of Business and Law. Ferry is currently a Secretary to the Chartered Institute Logistics and Transport (CILT) Western Australia (WA) Committee. Ferry is also Supply Chain & Logistics Association of Australia (SCLAA) WA Committee. Associate Professor Ferry Jie has maintained a high quality of research throughout his academic career including international scholarly leadership in the areas of supply chain management and logistics, including being invited to be keynote speaker and to give public lectures at symposiums and international conferences in Indonesia, Malaysia, Vietnam, China, UK and Australia. From 2017 to now, published more than 46 refereed journal articles—including

23 articles in Q1-ranked in the SCImago and 22 articles in Q2-ranked in the SCImago, and 8 refereed conference papers. Furthermore, Dr Jie has received research grants/awards adding up to over \$1.85 million between 2010 and 2020.

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**9<sup>th</sup> IEOM Annual International Conference, Bangkok, Thailand, March 5-7, 2019****Second IEOM Fellows Induction at the IEOM Bangkok Conference on March 6, 2019**



**University of Monterrey (UEM), Mexico Visit, May 29-30, 2018**



## University of Monterrey (UEM), Mexico Visit, May 29-30, 2018





# IEOM Global Council

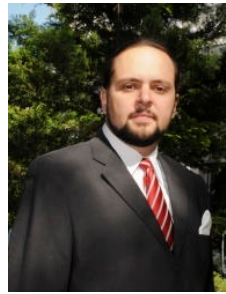
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**Professor Charles Mbohwa**  
Pro-Vice Chancellor Strategic  
Partnerships and Industrialisation  
University of Zimbabwe  
Mt Pleasant, Harare, Zimbabwe



**Professor Abdul Talib Bon, Ph.D.**  
Professor of Technology  
Management, Department of  
Production and Operations  
Management, Universiti Tun  
Hussein Onn Malaysia



**Prof. Vitor Mendes Caldana**  
Federal Institute of Sao Paulo (IFSP)  
– Sorocaba Campus  
Sorocaba, Sao Paulo, Brazil



**Dr. Eldon Caldwell**  
Director, Industrial Engineering  
Department  
Engineering School  
University of Costa Rica  
San Jose, Costa Rica



**Prof. Jose Arturo Garza-Reyes, Ph.D.**  
Professor of Operations  
Management  
Head of the Centre for Supply  
Chain Improvement  
College of Business, Law and  
Social Sciences, Derby  
Management School  
University of Derby, UK



**Dr. Umar Al-Turki**  
Professor  
Systems Engineering  
Department  
King Fahd University of  
Petroleum and Minerals  
Dhahran, Saudi Arabia



**Professor Eui H. Park, Ph.D.**  
Graduate Program Coordinator  
Professor, Department of Industrial  
and Systems Engineering  
North Carolina A&T State University  
Greensboro, North Carolina, USA



**Dr. Ilham Kissani**  
Assistant Professor of Engineering  
& Management Science  
School of Science & Engineering  
Al Akhawayn University  
Ifrane, Morocco



**Professor Abu Masud, Ph.D., P.E.**  
Emeritus Professor  
Department of Industrial and  
Manufacturing Engineering  
Wichita State University  
Kansas, USA



**Dr. Abdur Rahim**  
Professor  
Faculty of Business  
Administration  
University of New Brunswick  
Fredericton, NB, Canada



**Professor Hamid Parsaei, Ph.D., PE**  
Professor, Industrial and Systems  
Engineering  
Texas A&M University (College  
Station)  
USA



**Professor Bernardo Villarreal, Ph.D.**  
Professor, Department of  
Engineering  
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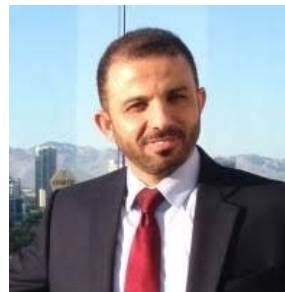
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/Six Sigma Master Black Belt,  
Van Dyke Transmission Plant  
Ford Motor Company,  
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## Assistant Program Director

**Ms. Rocksana Ahmed**  
Senior - BS in Mechanical  
and Manufacturing  
Engineering Technology,  
Lawrence Technological  
University, Southfield,  
Michigan, USA



# Upcoming Events

## 12<sup>th</sup> Annual IEOM Conference

Istanbul, Turkey, March 8-10, 2022

**Host & Venue:** Kadir Has University in collaboration with Sabanci University

**Conference Website:** [www.ieomsociety.org/istanbul2022/](http://www.ieomsociety.org/istanbul2022/)



Fourth African Conference on  
**Industrial Engineering and  
Operations Management**

Nsukka, Nigeria, April 5-7, 2022

**Host:** University of Nigeria, Nsukka



3rd South American Conference on  
**Industrial Engineering &  
Operations Management**

**IEOM Society** Asuncion, Paraguay, May 10-12, 2022



7<sup>th</sup> North American Conference on  
**Industrial Engineering and  
Operations Management**

June 12-14 2022, Orlando, Florida, USA

**IEOM Society** **Venue:** Holiday Inn & Suites Across from Universal Orlando



5<sup>th</sup> European Conference on  
**Industrial Engineering &  
Operations Management**

Rome, Italy, July 26-28, 2022

**IEOM Society** **Host:** Sapienza – University of Rome



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2<sup>nd</sup> Indian International Conference on  
**Industrial Engineering and  
Operations Management**

August 16-18, 2022, Warangal, India

**IEOM Society** **Host:** National Institute of Technology, Warangal



**NIT**  
warangal

Industrial Engineering and Operations Management Society International

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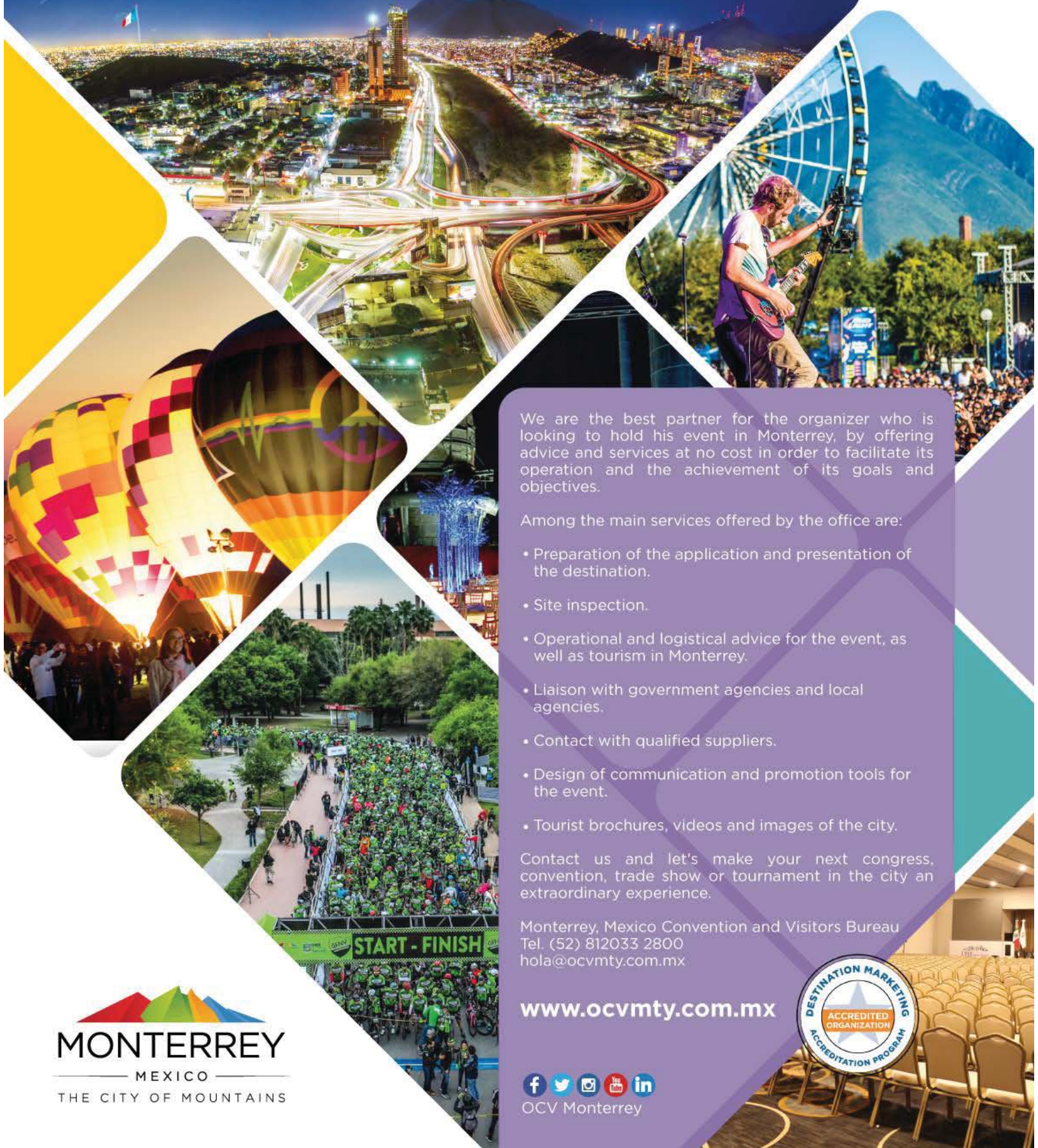
21415 Civic Center Dr., Suite 217, Southfield, Michigan 48076, USA

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