The Engineering Forum of the UDEM School of Engineering and Technologies

6th North American Industrial Engineering and Operations Management Conference

Monterrey, Mexico

November 3-5, 2021
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 (UDEM). 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
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 Pistruli. Director, Graduate Recruiting Clinical Professor of Engineering College of Engineering & Science University of Detroit Mercy. Detroit, Michigan, USA
11. Dr. Benito Flores Juárez. Dean of the School of Engineering and Technologies at the University of Monterrey.
12. Dr. Josep Miquel Piquè President of Technova Barcelona – La Salle Innovation Park. Manager of Internationalization and Innovation – La Salle UCL, Spain
13. M.S. Marco Antonio Vildoso Flores. Secretary for Advance FIT Engineering Studies, San Sebastian University, Santiago, Chile
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 26th 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. 6th 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
HONORY 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 Roccutelli, Assistant Professor, Politecnico 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 Pistrui, 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 IX: 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 pm Parallel Sessions Onsite - Breakout Rooms 1-4
3:00 - 4:45 pm 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).

Dr. Roccotelli has 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 Tecnologico 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, CPMM, 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 midsized 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, Denitsu, FedEx, KPMG, AT Kearney, Motorola, Wrigley, IBM, GrubHub, Comarch, Minmetronix, 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 Styira (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 Autonoma 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.
**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).

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**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.

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**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 Deallflow 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 Tecnologico de Monterrey, Mexico. She has a B.S. in Electronic Engineering from the Universidad de Antioquia, Colombia. She has been 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
Université 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

Corporate Partners
Cintas Corporation
Eaton Corporation
EFR Certification
Ford Motor Company
SIEMENS
Tooling Tech Group

Organization Partners
The Automotive Cluster of Nuevo León (CLAUT)
RELIEVE (Latin American Network of Energy Efficiency in Vehicles)
African Engineering Education Association (AAEA)
BKSTI: Agency for Cooperation of Higher Education of Industrial Engineering, Indonesia
CATME, Purdue University
Indian Institute of Industrial Engineering (IIEE)
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 Rivertrrend 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 Martin 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 Marenco**  
Senior Vice-president, Neoris

**Become an Intelligent Enterprise**

Saul Marenco, 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 recent 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 was 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

Dumitru 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 Ortíz
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 (UDEM), 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 (UDEM) 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 “UDEM’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 2005, 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.
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.

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 received his Master’s degree in Industrial Engineering from Lawrence Technological University, Michigan, USA in May 2020. He graduated from Savatribai 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.

Albes Urdaneta is Energy Manager at Ternium 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 Rodriguez
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 Donell Douglas group, based in New York. He returned to Barcelona as Commercial Director of Vascat, 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: Aída Miriam Cisneros Gómez

Panelists

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 de la incubación and entrepreneurship

Panel IV: Women in Industry and Academia
3:00 - 4:45 pm, Thursday, November 4, 2021 – Ballroom 1b
Panel Sessions

Partner: ITESM, Moderator: Adriana Vargas

Panelists

Grisel Trujillo (ITESM)  
Karina Astorga  
Dr. Alba Avila  
Nicole Rodriguez (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- Director 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

Maria Elena Huertas  
Environmental Engineer  
Universidad de los Andes  
Bogota, Colombia

Maria 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 it's 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 includes 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.
Continuous Innovation

At Eaton, we are continually pursuing new ideas with our current and future technologies to help customers meet their goals. Our valvetrain solutions such as cylinder deactivation and hollow engine valves that are engineered to deliver efficient performance while withstanding the extreme heat requirements. Our supercharger technologies for advanced boosting provide the instant throttle response and improved fuel efficiency customers desire. We are constantly innovating differentiated technologies to provide advanced solutions for the industry and our customers.

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Dra. Olivia Maricela Barrón Cano, UDEM
Dr. Antonio Martínez Torteya, UDEM
Andrés Hernández Gutiérrez, UDEM
Mohd Helmy Abd Wahab, Senior Lecturer & Academic Advisor, Department of Computer Engineering | Faculty of Electrical and Electronic Engineering, Universiti Tun Hussein Onn Malaysia

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Dr. Juan Carlos Tudón, UDEM

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Dr. Daniel Cordero, RELIEVE

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Dra. Teresa Verduzco, UDEM

CAD, CAM and CAE
Dr. Rashan Ziaidinov, Department of Industrial Engineering, Keimyung University, Daegu, South Korea

Construction Management
Santos Saenz Delgado, UDEM
Dr. Rakesh Ramnath, The University of the West Indies, St Augustine

Data Analytics and Big Data
Dra. Mariela Cerrada, RELIEVE
Dra. Diana Hernandez Alcántara, UDEM

Decision Sciences

Design and Analysis
Dr. Santiago Cruz, UDEM

Defence and Aviation
Andrés Hernández Gutiérrez, UDEM

Digital Transformation of Business Models
Ricardo Aapez. Innovation Director. Automotive Cluster of Nuevo Leon, A.C. (CLAUT)

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Industry Solutions Chair
Dr. Marcel Khasifirad, Assistant Professor of Industrial Engineering, Tecnológico de Monterrey, Editorial Board, JPCBR, Delegación Álvaro Obregón, México D.F., C.P.

Conference Secretariat
Dr. Taufq Islam, Operations Management, IEOM Society International

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Artificial Intelligence
María Magdalena Madrigal Lozano, FACPYA

Energy and Energy Efficiency
Dr. Miguel Angel Condoria, RELIEVE

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Dr. Osvaldo Aquines Gutiérrez, UDEM

Engineering Management
Dr. Adrian Ramirez Nafarrate, ITAM, Mexico City, Mexico

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Dr. David Gómez-Castorena, ITESM

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Dra. Diana Gómez García, UDEM

Human Factors and Ergonomics
Dra. Nerla Silva, UDEM

Industry 4.0
Reynol Eloy Villarreal González, FACPYA

Information Technology
Ing. María del Consuelo Cabildo Pinales, UDEM

Inventory Control
Leopoldo Eduardo Cárdenas-Barrón, ITESM

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Dra. María del Consuelo Jiménez, UDEM

Lean
Jesús Gerardo Cruz Alvarez, FACPYA

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Dr. José Ignacio González, UDEM

Dr. Oscar Ernesto Aranda Pérez. Director of Graduate Programs, UDEM Business School. (DINE)
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<td>Jesús Alberto Tamez García, UDEM</td>
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### Submissions and Speakers from Countries and Territories

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### Parallel Sessions

**November 3, 2021 (Wednesday)**

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<tr>
<td>10:00</td>
<td>Plenary I</td>
<td>Plenary III</td>
<td>Panel 1: Successful industrial solutions by students</td>
<td>Undergraduate Student Paper Competition</td>
<td>Smart Mobility and Smart Cities</td>
<td>Global Engineering Education I</td>
<td>Graduate Paper Competition</td>
<td>Industry 4.0</td>
<td>Modeling and Simulation</td>
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<td>Supply Chain and Logistics Competition</td>
<td>High School STEM Competition</td>
<td>Graduate Paper Competition</td>
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<td>12:15</td>
<td>Plenary VI</td>
<td>Plenary III</td>
<td>Panel 4: Automotive Electrical</td>
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**November 4, 2021 (Thursday)**

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<tr>
<td>10:00</td>
<td>Plenary I</td>
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<td>Panel 1: Successful industrial solutions by students</td>
<td>Environmental Systems Engineering</td>
<td>Modeling and IT</td>
<td>Industry Solutions I</td>
<td>Quality and Reliability</td>
<td>Smart Mobility and Cities</td>
<td>SCM and Finance</td>
<td>Data Analytics</td>
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<td>Plenary IV</td>
<td>Plenary III</td>
<td>Panel 2: Automotive Electrical</td>
<td>Manufacturing</td>
<td>Industry Solutions II</td>
<td>Systems Engineering</td>
<td>Lean Six Sigma</td>
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<td>Artificial Intelligence</td>
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<td>Plenary V</td>
<td>Plenary III</td>
<td>Panel 3: Automotive Electrical</td>
<td>Operations Management</td>
<td>Industry Solutions III</td>
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<td>Design and Analysis</td>
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**November 5, 2021 (Friday)**

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**Welcome Address:**
- **November 3, 2021 (Wednesday)**
  - **Welcome Address:** Dr. Manuel Montoya, General Director of the Automotive Cluster of Nuevo León (CLAUT) - Ballroom
- **November 4, 2021 (Thursday)**
  - **Welcome Address:** Autonomous University of Nuevo León and The Automotive Cluster of Nuevo León (CLAUT) - Ballroom
- **November 5, 2021 (Friday)**
  - **Welcome Address:** Tecnológico de Monterrey and RELIEVE (Latin American Network of Energy Efficiency in Vehicles) - Ballroom

**Breaks:**
- 10:15 - 11:45
- 12:30 - 1:00
- 2:45 - 3:15
- 4:45 - 5:15
- 6:45 - 7:15

**Conference Awards Ceremony:** Onsite at Cintermex (Virtually Joining Open Available)
November 3, 2021 (Wednesday): 8:00 am – 1:00 pm - Ballroom

**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**

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**
IEOM Monterrey Conference  PARALLEL SESSIONS  November 3-5, 2021

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 (UDEM), Mexico |
| Antonio Mogro |
| Tecnológico de Monterrey |
| Jorge Rodríguez (UDEM 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
Sinaí 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 Mayeila 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 O. 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 Sciences, Tecnológico de Monterrey, Monterrey, Nuevo León, Mexico

ID 485  Detection of Engineering Interest in Children Through an Intelligent System Using Biometric Signals
Gustavo Olivas Martínez, Milton Osel 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, Mexico

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-Espinosa, Diego M. Botín-Sanabria, Karen L. Rodríguez-Hernández, José F. Pacheco-Quintana, Sofía Sampogna-Montemayor, Rubén Morales-Menéndez, 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 Mejia, 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
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, Tecnologico 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, Tecnologico 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, Tecnologico 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
Xañin García and Roberto Catarìeda, Instituto Municipal de Planeación Saltillo-IMPLAN, Saltillo, México

ID 198 An integrated and comprehensive tool to assess urban mobility strategies José I. Huertas and Maria E. Huertas, School of Engineering and Science, Tecnologico 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, Tecnologico de Monterrey, NL 64849, México
David Mastrascusa, School of Science and Engineering, Tecnologico 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, Tecnologico 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 Carballeedo, 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. Guñara Ablitova
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)
Adedetej B. Badiru, Ph.D., PE, PMP, FIIIE
Adedetej 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
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
Maira 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 Quíroz-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, Nicolás Aguilar-Pelizzoli, Juan Carlos Quíroz-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 Alkhataba, Salah Haridyb, Mohammad Shamsuzzaman, Imad Alsyoufd, Department of Industrial Engineering and Engineering Management
University of Sharjah Sharjah, UAE
Ahmed Maged, Department of Systems Engineering and Engineering Management
Magamanton, 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
Luis 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 3810-193, 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
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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 Amla Withanaarachchi, 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 Udosenek, 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 Realvasquez Vargas, Department of Industrial Engineering, Tecnológico Nacional de México Tijuana, Tijuana, Baja California, 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. Phathane, 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 Marenco
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
IEOM Monterrey Conference PARALLEL SESSIONS November 3-5, 2021

Design for Manufacturing and Assembly in the Automotive Industry

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

Ing. Alejandro Villarreal
Expedia 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: 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 |

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-Tamés, Vicente Montermayor-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 Diaz-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 Saenz-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 Universidad 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 Lissette 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 Garcia, 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

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, Catzada Universidad 14418, Parque Industrial Internacional, Tijuana, Baja California 22390, Mexico

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, Catzada Universidad 14418, Parque Industrial Internacional, Tijuana, Baja California 22390, Mexico
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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
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

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 Sauer Sada, Instituto Tecnológico y de Estudios Superiores de Monterrey Campus Monterrey

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 Verdugo-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 UPAPU Puebla, Pue, Mexico

ID 184  New developments on the geometry of the Traveling Salesperson Problem
Adrian Ramirez-Nafarrate, Facultad de Ciencias Economicas y Empresariales, Universidad Panamericana, Zapopan, JAL 45010, Mexico

ID 457  Districting based on Stochastic Demands
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

ID 139  Application of Agile Methodologies for Design and Development of HealthTech products: Bio Testing Device
Luis Fernando Pedraza Ruiz, 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 Ajmaid, 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 Withanaarachchi, 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
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

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

November 3, 2021 (Wednesday) - Session: 5:00 – 6:45 pm

5:00 – 6:45 pm, WEDNESDAY
Relieve's Annual Meeting
Room 5 Virtual

5:00 – 5:20 pm (Wednesday, November 3)
Felipe Gómez Gallo
President at SPEED and Vice President for Student Affairs at IFEES
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

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Forecasting and Optimisation of Warehouse Shipment Demand

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

Mohd Helmy Abd Wahab, SMIEEE, MPECAMP, MIEng, 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 Bataller, 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, Andrea 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, Manilia, 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

Senior Design Project Competition

ID 211  Process Improvement for High Precision Components at Medical Devices Company (MDC)
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, Valentin 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 Osomo 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 Hadwiah Ahmad and Mohd Nizam Ab Rahman, Department of Mechanical and Manufacturing, The National University of Malaysia Selangor, Malaysia
Anif Azly Mohd, 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 Condori, Federico Albesa, 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, A448FPVY, Salta, Argentina

ID 473  The Implementation of the Capable Solar Power Through Tackling Challenges: KZN Region
Bantubenzani Nelson Mdloilo, 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
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 605  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 Engineering Department of Engineering Faculty, Pontificia Universidad Católica del Perú, Lima, Perú

ID 620  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 621  The Effect Of Investment Strategy And Risk Management On Bitcoin Online Trading In Bitcoin Investors, (Study on College Students in Bandung City, Indonesia)
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
Luis 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 Diphere, 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

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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
Bachtiar 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 Sumatranri Saragih, Faculty of Economics and Business, Universitas Darma Agung, Medan, 20153
Sumatera Utara, Indonesia
Rodri Syafirzal, Sekolah Tinggi Ilmu Ekonomi Bina Karya, Tebing Tinggi, 20631 Sumatera Utara, Indonesia
Jumadil 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-Diaz, 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 Pernata 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 Veby Nathasya, Communication Science Department, Faculty of Economics and Communication
Bina Nusantara University, Jakarta 11480, Indonesia
Yanuarita Kusuma Pernata 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
ID 276  SAFE: Smart Application for Emergency  
John Nicolo T. Cruz, Gabrielle Angelo D. Gabatin, John Gerick B. Gabunias, and Giores 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. Odoñez, Ronald O. Somocierra, and Giores 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, Obeya 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 Floy 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 Kathryne 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. Hayden 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  
Dematrina Pringgabayu, Politeknik Pajajaran ICB, Bandung, Indonesia  
Emilia Fitriana Dewi, School of Business and Management, Institut Teknologi Bandung, Indonesia  
Octaviari 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 Thresia 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 Charoenphaphat and Poti Chaopaisam, 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. Intl, 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

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
Ismael 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

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

ID 254  Information System Plan for Chew & Brew Milk Tea Company (A Case Study)
Karina Dizon, Dave Pagaduan, David Quindoza, Raphael Tandoc, Grace Lorraine Intl, 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 Intl, School of Information Technology, Mapúa University, Manila 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 Intl, 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

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<td>RRU 5G 8T8R Heatsink Embedded Vapor Chamber and Heat pipe Assemblies</td>
<td>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.</td>
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<td>Goal Programming Approach: Application in a Cake Business</td>
<td>Lorenzo Caday, Krisanta Ana Draculan, Jerome Liwanag, Wajid Mariño, Rene Estember, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines</td>
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<td>Ailah 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</td>
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<td>An Application of Decision Analysis on the Strategy of Professors with the Absorption of Knowledge Between Face-to-Face and Online Learning</td>
<td>Julianne Mikhaila Delos Reyes, Louis Miguel Dural, Julia Sofie Mangaogang, Gaea Marthe Victor, and Rene Estember, School of Industrial Engineering and Engineering management, Mapua University, Murala St. Intramuros, Manila 1002 Philippines</td>
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<td>Bui Minh Dinh, Hanoi University of Science and Technology</td>
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<td>Mediating Effect of Financial Performance on The Effect Green Innovation on Firm Value</td>
<td>Hidayatul Khusnah, Mardiyah Anugraini, and Riyan Sisiawan Putra, Faculty of Business Economics and Digital Technology, Universitas Nahdatul Ulama Surabaya, Surabaya 60237, East Java, Indonesia</td>
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<td>Evaluation and Digital Marketing Platform Together to Develop the Organizational Agility of Cooperatives in IndonesiaEnggal Srawidingsih, Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480</td>
<td>Agung Sudjatmoko, Business Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480 Mohamad Idris Laena, Indonesian Cooperative Council (DEKOPIN), Expert Council of the Indonesian Cooperative Council</td>
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<td>A Review of Strategic Management Research in Indonesia</td>
<td>Agung Purwono and Febby Candra Pratama, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480 Nur Afia and Elsa Rolyidah, Institute for Research and Community Services, Universitas Nahdatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia Rini Safitri, School of Management, National Central University, Taoyuan City 320317, Taiwan (R.O.C.)</td>
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<td>Product Quality, Price, Product Involvement, Atmosphere and WOM Effect on Purchase Intention at Starbucks Coffee Hayam Wuruk Drivethru Jakarta, Indonesia</td>
<td>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</td>
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<td>Sry Rosita, Andang Fazri, Sumarni, Universitas Jambi, Jambi</td>
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<td>Rini Safitri, School of Management, National Central University, Taoyuan City 320317, Taiwan (R.O.C.)</td>
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Inayatulloh, Information Systems Department, School of Information system, Bina Nusantara University, Jakarta, Indonesia 11480

ID 329 Improving SMEs Knowledge with Adoption Knowledge from Social Media
Rivaldhy N. Muhammad, Study Program of Law, Faculty of Law, Social and Political Sciences, Terbuka University, Indonesia

ID 314 Factors that Determine Repeat Purchases on E-Commerce
Enggal Swarindingsih, Management Department, Binus Business School, Bina Nusantara University, Jakarta, Indonesia 11480

ID 309 Improving SMEs Knowledge with Adoption Knowledge from Social Media
Indra Kusumadi Hartono, Information Systems Department, Bina Nusantara University, Jakarta, Indonesia 11480

ID 347 Analyzing Online Purchase Intentions in Fashion E-Commerce in Indonesia
Enggal Swarindingsih, Management Department, Binus Business School, Bina Nusantara University, Jakarta, Indonesia 11480

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

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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

Hilda Kundai Chikwanda and Andlle 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 Withanaarachchi, Department of Industrial Management, University of Kelaniya, Daluwagama, 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
Mutli 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

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

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

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 Kari 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 Yhigo 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. Tadle, John Timothy P. Villacorte, Romalyn Galingan
Department of Industrial Engineering, College of Engineering and Architectural Technology 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 Management, Mapúa University, Manila, Philippines

ID 444  Markov Chain Analysis of Student Learning Progression in a Quarter Academic System
Jhn Lawrence G. Quimio, Anthony A. Sanchez, Kianna Denise C. Villapando, Rene D. Estember, School of Industrial Engineering and 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 Management, Mapúa University, Intramuros, Manila, Philippines

ID 462  The Applications of Game Theory in Processing the Orders of Shopee and Lazada
Decree Anne A. Haboy, Daniel John B. Sacramento, Ervin Josh P. Santos, Christine Angelie Y. Taw, and Rene D. Estember, School of Industrial Engineering and 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  Analyzing 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 Sytems Engineering  Room 5 Virtual
Session Chair: Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapúa 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 Ologunju, Oludolapo Akani Olanrewaju, Department of Industrial Engineering, Faculty of Engineering and the Built Environment, Durban university of Technology, Durban, South Africa
Rubén Irusta-Mata, Instituto of Sustainable Processes, University of Valladolid, Dr. Mergetina 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  Ecometric Panel Analysis of Transportation Sub Sector companies: Firm-specific factors Approach
Felis Irhamni, Ulfyah Mazidatun Ni’mah, Rian 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

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

Cindy Jane Suharjo, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta, Indonesia

Windaningsih, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta, Indonesia

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

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

IEOM Monterrey Conference

PARALLEL SESSIONS

November 3-5, 2021

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

6:00 – 8:00 am, THURSDAY

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

Construction Management

Room 6 Virtual

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

Mohammad 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

Mohammad 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


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 Alisharqawi, Township of South Stomront, 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, Adhiriswa 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 Pratwati and Jane Sekarsari Tamtana, Civil Engineering Master Program, Faculty of Civil Engineering and Planning, Universitas Trisakti, Jakarta, Indonesia

ID 595 Optimization of Service Quality: Quality Function Deployment Approach

Sukaris, M. Fakhruin Syah, Aris 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, Ahi 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 60117

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 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, Kianna Denise C. Villapando, Ma. Janice J. Gumasing, School of Industrial Engineering and Management, Mapua University, Muralla St., Intramuros, Manila, 1002

ID 199 User Satisfation 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

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


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

Naniek Utami Handayani, Industrial Engineering Department, Diponegoro University, Prof. Soedarto, S.H., Semarang, 50275, Indonesia

Mohammad 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

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6th North American Conference
Hikmahsanty Suci Larasati, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia
Yanuarita Kusuma Pernama 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 Aji 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

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 Pernama Sari, Communication Science Department, Faculty of Economics and Communication, Bina Nusantara University, Jakarta 11480, Indonesia
Bruce Dame Lacera, 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 307  Coordination and Non Coordination Lease Contract Model with Availability Target
Humiras Hardi Purba, Master of Industrial Engineering Department, Universitas Mercu Buana, Kembangan, Jakarta, Indonesia
Choesnul Jaqin, Master of Industrial Engineering Department, Universitas Mercu Buana, Kembangan, 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 571  Work Loyalty and Employee Performance: The Mediating Role of Organizational Commitment
Nasyik Ifadah, Arasy Almudin, Tri Utoyo, Joko Suyono, Narotama University, Surabaya, Indonesia
Subas, Sekolah Tinggi Agama Islam Al Fithrah, Surabaya, Indonesia

6:00 – 8:00 am, THURSDAY

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

**Keynote Speakers – Day 2**

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

November 4, 2021 (Thursday) - Session: 1:00 – 2:45 pm

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
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 Muns, 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 Muns, 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
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 Mathematical 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 Halilu, Hailekiros Sebhato, Kinfe Tsegay, Hailesselasie Mehari, Industrial Engineering Department, Ethiopian Institute of Technology-Mekelle (EIT-M), Mekelle University, Mekelle, Tigray, Ethiopia

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

ID 651 Generating Artificial Driving Patterns by Using Generative Adversarial Networks
Fania Pacheco, Department of Mechanical and Electrical Engineering, University of Southern Denmark, SDU, Sonderborg, 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, NL, 64849, Mexico

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,


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IEOM Monterrey Conference  PARALLEL SESSIONS  November 3-5, 2021

Alexandr M. Sokolov, Ph.D., Anish Ghimire, M.B.A., Duaa Nawaffeleh 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. Robiles, 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
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)

ID 259 Understanding the Business Considerations for Future Model-building in the Financial Industry
Henry I Schnetler, Mame De Vries, Wilina 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

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 476 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 Ifaki Loyola Rosales, Estudiantes de Ingeniería Industrial y de Sistemas, Instituto de Estudios Superiores de Monterrey, Monterrey Nuevo León

ID 527 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 Politécnica 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 Paso, 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, Nigde Ömer Halisdemir Üniversitesi, Rectorate, Central Campus, Bor Yolu, Nigde 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

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<tr>
<th>ID</th>
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<th>Authors</th>
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<tr>
<td>327</td>
<td>The concept of maintenance with a sustainable approach: a review of the literature based on content analysis</td>
<td>Márian Pérez Pérez and Ángel Tomás Pérez Rodríguez, Department of Industrial Engineering and Chemistry Department, University of Holguín, Holguín, Cuba</td>
</tr>
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<td>468</td>
<td>Achieving Mass Customization Through Integrating Human Factors in Product Platform Concepts During Product Design</td>
<td>Oscar Ming Liu, Venkat Allada, Engineering Management and Systems Engineering Department, Missouri University of Science and Technology Rolla, MO 65401, USA</td>
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**November 4, 2021 (Thursday) - Session: 5:00 – 6:45 pm**

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<th>Time</th>
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<tr>
<td>5:00</td>
<td>Relieve's Workshop on &quot;Fuel Consumption in Heavy Duty Vehicles&quot;</td>
<td>Ulises López Gonzales</td>
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<tr>
<td>088</td>
<td>Manpower Reduction in Crankshaft Cell 3 Fabrication Line</td>
<td>S.Karthik, Assistant Professor, Department of Mechanical Engineering, Veltech Rangarajan Dr.Sagunthala R&amp;D Institute of Science and Technology, Avadi, Chennai, Tamilnadu, India</td>
</tr>
<tr>
<td>214</td>
<td>Productivity Improvement in a Sugar Company: A Lean management approach</td>
<td>Maximiliano Arroyo Ulloa, Faculty of Engineering, Universidad Católica Santo Toribio de Mogrovejo, Chiclayo, Peru</td>
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<td>253</td>
<td>Strategies to Improve the Logistics of a COVID-19 Screening Process within a Lean Six Sigma Framework</td>
<td>Jeanne-Marie Lawrence, Teaching Instructor, Department of Technology Systems, College of Engineering and Technology, East Carolina University, Greenville, NC 27858, USA</td>
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<tr>
<td>229</td>
<td>Implementation of Six Sigma as Quality Improvement in a South African Municipality</td>
<td>Paul Makibelo, Bheki Makhanya and Hannelie Nel, Department of Engineering Management, University of Johannesburg, South Africa</td>
</tr>
<tr>
<td>066</td>
<td>Fostering Creativity and Innovations based on Classification Schemes: Case Studies in Engineering Design Education</td>
<td>Karl Hain and Christoph Rappt, Faculty of Mechanical Engineering and Mechatronics, DIT Deggendorf Institute of Technology, 94469 Deggendorf, Bavaria, Germany</td>
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<td>5:00 – 6:45 pm, THURSDAY</td>
<td>Smart Mobility and Smart Cities</td>
<td>Room 6 Virtual</td>
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<td>5:00 – 6:45 pm, THURSDAY</td>
<td>Entrepreneurship</td>
<td>Room 7 Virtual</td>
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<td>5:00 – 6:45 pm, THURSDAY</td>
<td>Artificial Intelligence</td>
<td>Room 8 Virtual</td>
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**Session Chairs:**
- Raúl Morales Salcedo
- Xavier Cantú
- Gilberto Montes

**IDs:**
- **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
  - Jessica Gissella Maradey Lázaro
  - Mechatronics Engineering Program, Universidad Autónoma de Bucaramanga, Bucaramanga, Santander, Colombia

- **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

- **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
  - Hendro Nindito
  - Information Systems Department, School of Information Systems, Bina Nusantara University, Jakarta 11480, Indonesia

- **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
  - Evaristus Didik Madyatmadja
  - Information Systems Department, School of Information Systems, Bina Nusantara University, Jakarta 11480, Indonesia

- **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
  - Michael Sizwe Mkwazazi
  - 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
  - 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
  - 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, University of Johannesburg, Cnr Kingsway Avenue & University Road, Auckland Park, South Africa

- **ID 394** Digital Transformation in Small Medium Enterprises: Mapping of the Knowledge Base
  - Febby Candra Pratama
  - Agung Purnomo
  - Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta 11480, Indonesia
  - Fairoz Iqbal Maulana
  - Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta 11480, Indonesia
  - Nana Abdul Aziz
  - Political Science and Public Administration, Bandirma University Turki, Bandirma 10200, Turki
  - Inggit Kresna Maharsi
  - Chemical and Materials Engineering, National Central University, Taoyuan City 320317, Taiwan (R.O.C.)

**Contact:**
- Dr. Patricia Eugenia Sortillón González
  - Industrial Engineering Professor
  - Universidad de Sonora
  - Hermosillo, Sonora, Mexico
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
Saïda 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, Saïda Bouyegh, Kotbia Labiod, Noura Traiaia and Mohamed Hassanl, 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
Saïda Bouyegh, Samira Tlili, Kotbia Labiod and Mohamed Hassanl, 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

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 Irhamni 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 Sulaiman 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, Meritina Teocoal, Fredelia 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 Irhamni 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  
Rokhmud Budiyono, Sekolah Tinggi Ilmu Ekonomi Semarang, Indonesia  
Dwi Novaria, IAIN Pekalongan, Indonesia  
Latna Nurdiyana, 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  
Emra 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  
Jailil 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 Rahmant1, Muhammad Wildan Fawaid2, Aang Kunali3, Abd. Rosyid4, 1,3,4Institut Agama Islam Al-Khairat Parekasan, 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 Riyandi1, Bambang Wijonarko2, Aji Sudibyo3, Imron Imron4, M. Sinta Nurhayati5, STMIK Nusa Mandiri 1, Universitas Bina Sarana Informatika 2,3, Jl. Jati Waringin no 2 Jakarta Indonesia,1, Jl. Kramat 98 Jakarta Indonesia

ID 634  Characteristics Of Vegetable Canistel Mousse Dessert (Pouteria campechiana) Using Polysacaride Stabilizer  
Ety Hesthiati, Inkorena GS Sukarton0, 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 Biological Graduate School, Universitas Nasional, Menara UNAS II, Jl. Harsono RM, Ragunan, Jakarta Selatan 12550, 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 Negron Guzmán, Joshua Rios Vachier and Jannette Pérez-Barbosa, Department of Engineering, Universidad Ana G. Méndez, 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 Amal Ilmiah Yapis Wamena, Indonesia

ID 640  Characteristics Of Vegetable Canistel Mousse Dessert (Pouteria campechiana) Using Polysacaride Stabilizer  
Ety Hesthiati, Inkoera GS Sukarton0, Tri Waluyo and Nurul Hanifah, Faculty of Agriculture, Universitas Nasional, Indonesia

ID 641  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
ID 648  Designing the Sustainable Collaboration among the Local Government, Community and Academics: The Sharia-Based Economic Growth
Mohd. Heikal, Muammar Khaddafii, Rico Nur Ilham, Fuadi, Faculty of Economics and Business Universitas Malikussaleh, Bung Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia
Isfentri Sadalia, Department of Management, Universitas Sumatera Utara, Medan Baru, Medan, 20222 Sumatera Utara, Indonesia
Jumadi 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 Khaddafii, Rico Nur Ilham, Faculty of Economics and Business, Universitas Malikussaleh, Bung 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 Mulyaningish, Institut Agama Islam Negeri Syekh Nurjati Cirebon, Indonesia
Winci Firdaus, Badan Pengembangan dan Pembinaan Bahasa, Indonesia
Vita Ika Sari, Universitas Pancasakti Tegal, Indonesia

ID 180  Management of Information and Communication Technology (ICT) Learning Packages
Riza Faishol, Institut Agama Islam (IAI) Ibrahimiy Genteng Banyuwangi, Indonesia
Syihaabul Huda, Institut Teknologi dan Bisnis Ahmad Dahlan Jakarta, Indonesia
Asrinal Wahdan Wilisa, STKIP NU Indramayu, Indonesia
Khitfiy Hady Prasetya, Universitas Balikpapan, Indonesia
Ani Musdolifah, Universitas Balikpapan, Indonesia

ID 422  The Influence of Organizational Culture on Employee Performance at Pt Sipatex Putri Lestari Majalaya Bandung
Syafif Marwan, Bachruddin Saleh Luturlean, 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
Saidik 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 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
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  
Natalia, 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, Hong Kong, China  
Jumadi 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, Lida Mayangsari, School of Business and Management, Institut Teknologi Bandung, Bandung, West Java 40132, Indonesia  
Dwi Rahmawati, Sekolah Tinggi Ilmu Ekonomi Ekuilas, Neglasari, Cibeunying Kaler, Bandung, 40124 Jawa Barat, Indonesia  
Jumadi 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: Duana 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 Tecnologico Comfenalco Cartagena de Indias, Colombia  

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 Nadifilatin, Department of Information System, Institut Teknologi Sepuluh Nopember, Surabaya, 60111, Indonesia  
Adji Candra Kumiansi, 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 Kumiansi, Fiki Rohmatul Maula, Koulan Tsakiliara, 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 Ardiansyahmirja, Department of Technology Management, Institut Teknologi Sepuluh Nopember, Surabaya, 60111, Indonesia  
Reny Nadifilatin, 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 Jnunnior Anaya Medina, Diego Daniel Martinez 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 Agwu, and Sara Masoud, Department of Industrial and Systems Engineering, Wayne State University Detroit, MI 48201, USA  
Suzan Amslarturk, 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  
Duana 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: Thakaramahla Lehohla, 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, 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, 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, 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, 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, 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, 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
Thakaramahla Lehohla, 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

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 Nahdatul Ulama Sidoarjo, Sidoarjo 61218, Indonesia
Fairuz Izqal Maulana, Computer Science Department, Bina Nusantara University, Jakarta 11480, Indonesia
Khoiriyatun Nahdiyah, Elementary Education Department, Universitas Nahdatul 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 Department Universitas Pamulang Tangerang Selatan, Indonesia
Munarsih, Management Department Universitas Pamulang Tangerang Selatan, Indonesia
Ridhwan Noor Alam, Management Department Universitas Pamulang Tangerang Selatan, Indonesia
Ria Estiana, Business Administration Department Polytechnic LP3I Jakarta, Indonesia
Nurul Giswi Karomah, Business Administration Department Polytechnic LP3I Jakarta, Indonesia

ID 161  The Influence of Entrepreneurial Orientation on Competitive Advantage and Company Performance
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| 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                                                                 |
| 170  | Digital Age Education and its Applications in Higher Education        | Nisaul Barokati Seliro Wangi, Universitas Islam Darul U'ulum Lamongan  
Winci Firdaus, Badan Pengembangan dan Pembinaan Bahasa  
Ryan Angga Pratama, Balikpapan University  
Yogi Purnama, Universitas Indraprasta PGRI  
Edwar Kemal, STKIP PGRI Sumbar                                                                 |
| 664  | The Impact of Covid-19 on Micro, Small, and Medium Enterprises in Central Java, Indonesia: The Need for Economic Recovery | Wiwin Widiaastuti, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia  
Jumadi Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia                                                                 |
| 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  
Jumadi Saputra, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia                                                                 |
| 666  | Review: Floating Homes Transportation Opportunities in Indonesia     | Arie Indarto, 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 Wiwono Mudjanarko, Civil Engineering Faculty, Narotama University Surabaya, Jawa Timur, Indonesia  
Joewono Prasetio, Department of Transportation Engineering Technology, Universiti Tun Hussein Onn Malaysia, 84600 Pagoh, Johor, Malaysia  
Mohd Idrus Mohd Masrin, Department of Civil Engineering, Universiti Tun Hussein Onn Malaysia, Malaysia                                                                 |
| 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                                                                                                  |

### Business Management

#### 9:00 – 10:45 pm, THURSDAY

**Session Chair:** Galo Paiva, Departamento de Ingeniería Industrial y Sistemas, Universidad de La Frontera, Temuco, Chile

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| 171 | Android-Based Interactive Multimedia Development Integration Of Poetry Text Material With Islamic Values | Tuti Kusniarti, Universitas Islam Madaniyah Malang  
Dina Putri Juni Astuti, IAIN Bengkulu  
Wahyudi Rahmat, STKIP PGRI Sumatera Barat  
Samsiarni, STKIP PGRI Sumatera Barat  
Aruna Laila, STKIP PGRI Sumbar                                                                 |
| 172 | Investigation of Early Study Stage for Young Researcher              | Diah Ambarani Munawaroh, Instructional Technology Department, Universitas Negeri Malang, Indonesia  
v.safereer@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                                                                 |
| 173 | The Pyramid of Political Power as Mataraman Community Identity in Kediri Indonesia | Taufik Alam, Darsono Wisadirana, Sanggar Kanto, Hilmy Mochta and Wawan Sobari, Brawijaya University Malang                                                                 |
| 174 | The Influence Of “Ruang Guru” Platform Learning Model On The Learning Outcomes | Nisaul Barokati Seliro Wangi, Universitas Islam Darul U'ulum Lamongan  
Deden, Balikpapan University  
Nurlia Latipah, IAIN Bengkulu  
Ikke Wulan Dari, IAIN Bengkulu  
Akhirudin, IAIN Bengkulu                                                                 |
| 175 | Development of Learning Media Text Tutorials Video-Based Procedures Screencast O Matic | Hetilaniar, Universitas PGRI Palembang  
Nisaul Barokati Seliro Wangi, Universitas Islam Darul U'ulum Lamongan  
Dian Jelita, IAIN Bengkulu  
Suantoko, Universitas PGRI Ronggolawe  
Asri Wahyuni Sari, STKIP PGRI SUMBAR                                                                 |
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<td>Model to Assess Behavioral Intention of Entrepreneurs - Adoption of Crowdfunding Platforms</td>
<td>Sayuri Perera and Suren Peter, Department of Industrial Management, University of Kelaniya, Dalugama, Kelaniya, Sri Lanka</td>
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<td>658</td>
<td>Handling the Children Sexual Violence: Women’s Leadership Perspective</td>
<td>Natta Sanjaya, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia</td>
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<tr>
<td>659</td>
<td>The Impact of COVID-19 Pandemic on Sustainable Development in Southeast Asia</td>
<td>Noorvita Ika Mardianti, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia</td>
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<td>Local Government Public Service Quality Innovation in Bengkulu City: A Case Study of SAMSAT VIRTU Application</td>
<td>Noviliza Eka Patrisia, Hardi Warsono and Augustin Rina Herwati, Faculty of Social and Political Sciences, Universitas Diponegoro, Tembalang, Semarang, Jawa Tengah 50275, Indonesia</td>
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<td>671</td>
<td>Semi-Modern Market Competitiveness Strategy in the Era of Digital Disruption</td>
<td>Fredi Andria, Sri Hartini, and Sri Nursianti, Department of Management, Pakuan University, Bogor, Indonesia</td>
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**9:00 – 10:45 pm, THURSDAY**

**Session Chair:** Tri Pujadi, School of Information Systems, Bina Nusantara University, Jakarta, Indonesia

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<td>A Study of m-Business Research Using Bibliometric Review</td>
<td>Agung Purnomo, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia</td>
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<td>466</td>
<td>Effectiveness of Gamification Strategy to Increasing Shopee's Customer Loyalty In Shopee's Marketing Public Relations</td>
<td>Benedictus Dicky I., Public Relations Department, Faculty of Economics &amp; Communication Bina Nusantara University Jakarta, Indonesia 11480 Gabrielli Sagita Putri, Public Relations Department, Faculty of Economics &amp; Communication Bina Nusantara University Jakarta, Indonesia 11480 Galuh Ayu Savitri, Public Relations Department, Faculty of Economics &amp; Communication Bina Nusantara University Jakarta, Indonesia 11480 Adhi Murti Citra Amalia, Public Relations Department, Faculty of Economics &amp; Communication Bina Nusantara University Jakarta, Indonesia 11480</td>
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<td>Supply Chain Risk Mitigation with Supply Risk Management approach</td>
<td>Tri Pujadi, School of Information systems, Bina Nusantara University, Jakarta, Indonesia</td>
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<td>Preventive Maintenance Modeling on Die Casting Machines with Information Systems</td>
<td>Tri Pujadi, School of Information Systems, Bina Nusantara University, Jakarta, Indonesia</td>
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<td>103</td>
<td>Systematic Literature Review on Managing the Barriers of Industry 4.0 Implementation in Sri Lankan Manufacturing Setting</td>
<td>Lahiru Vimukthi, Dr. Amila Withanaarachchi and Dr. Suren Peter, Department of Industrial Management, University of Kelaniya, Dalugama, Kelaniya, Sri LankaService Systems and Management:</td>
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<td>299</td>
<td>Online Food Delivery (OFD) apps: What do the customers look at?</td>
<td>Nurul Najia Zolkipli, Department of Production and Operation Management, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, 86400, Batu Pahat, Johor, Malaysia Roiaizan Ramlan, Chan Shiah 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</td>
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</table>
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 Prasitya, 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
Marialaela 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
Nuriniati 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 Rosiyah, 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 Oqueliz, Silvia Campos, Robert Castro, Demetrio Mandujano, Mario Chauca, Engineering Faculty, Ricardo Palma University, Av. Alfredo Benavides 5440, Santiago de Surco 15039, Peru

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 M. Makmur, Sekolah Tinggi Agama Islam Darul Dakhwah Wal Insyad Kota Makassar, Indonesia
Nuruljuddin Sirojuddin, Universitas Pendidikan Muhammadiyah Sorong, Indonesia

ID 106  Factors Influencing Green Purchasing Behaviour in Consumers in Developing Countries
Chanika Hansani and Amla Withanarachchi, 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
John Tampil Purba, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia
Rico Nur Ilham, Faculty of Economics and Business, Universitas Malikussaleh, Blang Pulo, Muara Satu, Aceh Utara, 24355 Aceh, Indonesia
Nuriadi and Eka Fitriana, Faculty of Education, Universitas Mataram, Indonesia

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 Mgbeze 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 Ilhamsyah, 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**

**6:00 – 8:00 am, FRIDAY**

**Case Studies**

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, Indonesia

ID 511 Communication Experience of The Neighborhood Chief in Covid 19 Handling in Kelurahan Pangkalan Mansyur Medan  
Nadra Ideyanie Vita, Nina Siti Salmaniah Siregar and Agnipta 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, Makasar, Indonesia

ID 512 Strategies for Utilizing Instagram as a Digital Marketing Communication Media in Samudera Kuphi Medan Coffeeshop  
Abdul Haris and Effati 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 Sumatra, Indonesia  
Agung Suharyanto, Bebby Masitho Batubara and Adam, Public Administration Study Program, Faculty of Social and Political Sciences, Universitas Medan Area, North Sumatera, Indonesia  
Armasyah Matondang & Syarifuddin Ritonga, Communication Science Study Program, Faculty of Social and Political Sciences, Universitas Medan Area, North Sumatera, Indonesia

ID 514 How Media Sees the Brawl Between Residents in Belawan, North Sumatra, Indonesia (Case Study)  
Dedi Sahputra & Reha Isabella Karenina Barus, Communication Science Study Program, Faculty of Social and Political Sciences, Universitas Medan Area, North Sumatera, Indonesia  
Bahrum Jaril, 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  

ID 516 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 Marifo, 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 Politécnica Salesiana, Cuenca, Ecuador
Roger Cletot Martínez, 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
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 Prasetyo1; Darmawan Pontan2, 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 Komalawati1, Muhammad Aflian2, Alfirahmi3, Jhulianfika Irrianda4, Retno Ekasari5, Department of Communication Management
Stiami Institute of Social Sciences and Management, Jakarta, 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
School of Mechanical and Manufacturing Engineering, Mapua University, Muralia St., 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
Gowgisa 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
José Ignacio Castillo-Velázquez, ADVNETLAB, Telecommunications Engineering Department, Autonomous University of Mexico City
Mexico City, Mexico

**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

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ID 576 Econometric Panel Analysis of Transportation Sub Sector companies: Firm-specific factors Approach
Firly Irhamni, Ulfyiafah Mazidatun N/ma, and Ryan 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-Azam1, Cahyo Darujati1, Engineering and Computer Science Faculty, Narotama University, Surabaya, Jawa Timur, 60117, Indonesia
Sri Wiwoho Mudjanarko, 2, 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 Salihu 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, Engineering and Computer Science Faculty, Narotama University, Surabaya, Jawa Timur, 60117, Indonesia
Sri Wiwoho Mudjanarko, 2, Civil Engineering Faculty, Narotama University, Surabaya, Jawa Timur, 60117, Indonesia

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, Henri Pridia Rukmini Sari, Lila Muliani, Inti Krisnawati, Department of Communication Management, Department of Hospitality & Tourism Stami 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
Hendra Eka Prastiy, 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

ID 353 Preparation and characteristics of synthesized hydroxyapatite from bovine bones and by co-precipitation method
Saïda Bouyegh, Samira Tlili, Kotibia 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

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 Mashfigur 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 Mashfigur 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

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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, Soedarman, 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 Kumiawan, 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

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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#### 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 (UDEM), 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  
**Panel 5 - 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 Vázquez-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.
Arlethe Yarí 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
Adrián Ramirez-Nafarrate, Mitchell Ruiz Martínez, and Juan C. Grayeb Pereira, Facultad de Ciencias Económicas y Empresariales, Universidad Panameicana, 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.

ID 091  The Soft Skills as a Drivers of Customer Service in the Automobile Dealers

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 Cázare, 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

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 Nicolás 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

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ID 008  Walnut oil extraction methodology to inhibit the polyphenol oxidase enzyme  
Roberto Montemayor Rojas  Monterrey Nuevo Leon Mexico

ID 049  Familiarity 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 Odió, 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  
Ale 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 Shamsuzzohra  
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  
ETSII. Universidad Rey Juan Carlos. Madrid. España

Adem ERİK, 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 (IEETI), 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 Anahi 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 Shamassuzaman 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 Neru, Terengganu, Malaysia

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 Neru, Terengganu, Malaysia
Nora’aini Ali, Faculty of Ocean Engineering Technology and Informatics, Universiti Malaysia Terengganu, Kuala Neru, Terengganu, Malaysia

ID 550  Social Impact of Small Seawater Desalination Plant of Local Community: A Social Life Cycle Assessment
Ilyanni Saziria Nazaran, Latifah Abdul Ghani, Zikri Muhammad, Jumadil Saputra, Faculty of Business, Economic and Social Development
Universiti Malaysia Terengganu, 21030 Kuala Neru, Terengganu, Malaysia
Nora’aini Ali, Faculty of Ocean Engineering Technology and Informatics, Universiti Malaysia Terengganu, Kuala Neru, 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

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 Pavia-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 Prasetio, 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
Lakharis Inuzula, Faculty of Economics and Business, Universitas Islam Kebangsaan Indonesia, Bireun 24212 Aceh, 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 Prasetio, 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 Prasetio and Yudi Ramdhani, Computer Science Program, Universitas AdhiraJasa Reswara Sanjaya, Bandung, Indonesia
Doni Purnama Alamsyah, and Kumiadi, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

IEOM Monterrey Conference  6th North American Conference
### 3:00 – 4:45 pm, FRIDAY

#### Plenary Session - VI

**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

#### 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  

**ID 486 The Bullwhip Effect in the Northern States of Mexico: an Econometric and Sustainable Analysis in the Transport and Logistics Sector**

Fabrício Moreno-Baca, Patricia Cano-Olivos, Industrial & Logistics Faculty, Universidad Popular Autónoma del Estado de Puebla, 17 Sur 901, Barrio de Santiago, 72410, Puebla, México

**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 Cuautle-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

**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 72410, Mexico

#### Data Analytics

**Breakout Room 2 - Onsite**

**Session Chair:** Dr. José Daniel Morecillo. Civil and Management Engineering. Universidad de Monterrey

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ID 132  A proposal for deep learning model development for pyuria detection  
Sergio Eduardo Anaya Alvarez, Catalina de León Santos, Azael Jesús Cortés Capetillo, Jorge de J Lozoya-Santos, David Güemes-Castorena  
Department of science and manufacturing, Tecnologico 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 Carballelo, 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-Patra, Alba Coveló, Miguel A. Hernandez, Raúl Valdés and Arturo Barba-Pingarrón, Surface Engineering Center (CENISA) - Engineering Faculty, National Autonomous University of Mexico, Circuito Exterior. Ciudad Universitaria. CDMX  
Jesus 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 Cazares 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 Anzaldua, 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 Idravo-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 Cautaíeda, 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 Soin 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, Tecnologico de Monterrey, Monterrey, Mexico  
Oscar Serrano-Guevaraa, Energy and Climate Change Research Group, School of Engineering and Sciences, Tecnologico de Monterrey, Monterrey, Mexico  
Jenny Diaz-Ramirez, 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
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”

Dr. Helena Carvalho  
Assistant Professor, Department of Mechanical and Industrial Engineering  
NOVA School of Science and Technology  
NOVA University Lisbon, Caparica, Portugal

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 And Environment Work Using 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
### Parallel Sessions

**November 3-5, 2021**

#### 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**

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<td><strong>5:00 – 6:45 pm, FRIDAY</strong></td>
<td>Room 6 Virtual</td>
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<td><strong>Session Chair:</strong></td>
<td>Lino Garza, Physics and Mathematics Department.Universidad de Monterrey</td>
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**ID 521** | An aggregated time series forecasting model for the health and wellness sector: case of a Brazilian retail company  
Carlos Emanu 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  
Szwe Mkwanzasi, 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 Nurtna, 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, Romalyyn Galingan, Artiane Palisoc, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City, Cubao, Quezon City, Philippines

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<td><strong>5:00 – 6:45 pm, FRIDAY</strong></td>
<td>Room 7 Virtual</td>
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<tr>
<td><strong>Session Chair:</strong></td>
<td>Mahir Faysal</td>
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**ID 626** | Bali And Regional Government Support, Transportation Taking Off  
Muhammad Ikhsan Setiawan and Ronny Durrrotun Nasihiin, 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 Mulo Utomo, Faculty of Electrical and Electronic Engineering, Universiti Tun Hussein Onn Malaysia, Parit Raja, Malaysia  
Agus Sukoco, Tubagus Purnaworsuami and Achmad Muchayvan, 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 Durrrotun Nasihiin and Muhammad Ikhsan Setiawan, Department of Civil Engineering, Narotama University, Surabaya, Indonesia
ID 628  **Antioestoporotic 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 Aryanu 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, 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 Octavijatna 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 Sunantyo

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  
Rino caravan, 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**
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 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 677  Implementation of the Role-Playing in Developing the Speaking Skills for Early Childhood
Kartika Fajriani, Universitas Nahdatul 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**

**Conference Awards Ceremony at Cintermex**
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27th 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 Chong 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 Polyligual 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 ProgramEvaluator (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 scholarly 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 International 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 specializes 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/Cathedralicus of the University of Costa Rica, Central America; member of the IEM 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, Mexico. 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, Bogotá, 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, Teschnische Hochschule Wildau and Högskola I Borås in Sweden. She is a visiting professor in postgraduate activities at the Oíloto 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 IIE, 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.

IEOM Society International

6th North American Conference

27th IEOM Global Engineering Education

Monterrey, Mexico, November 3-5, 2021
An experienced educator, Dr. Arefzou 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 Quinipiac 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.
Shanthi Muthuswamy, Ph.D.
Professor, Department of Engineering Technology
Northern Illinois University, DeKalb, 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 7 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 IFEES
Trainee, United Nations Institute for Training and Research (UNITAR), Bogotá, 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 (IFEEE). Trainee at UNITAR Prosperity Division.

5.20 – 5.40 pm (Wednesday, November 3)

Dr. Cristian Rusu
Full Professor and Coordinator “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.
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 an consultant with Stockamp and Associates, implementing revenue cycle and process improvements in hospital settings.

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.

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 (UTM). He has actively involved in many academic activities such as being invited speaker at ICRITO 2015 (India), IPICRT2013 (UTP), IPICRT2014 (UNIMAP) and ITPRTI 2012 (UTM). 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 scholarily 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).

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.
26th 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. 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.
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)
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. Hosseinkhani 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. Hosseinkhani 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 WebInnovation® 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 WebInnovationX, 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
Medellin, 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.

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 currently works as an Analytics (AI/ML) Officer at Grupo Rotoplas Digital division, after assuming different roles in the corporate IT team. Juan Carlos’ 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.

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).

Dr. Ihfasuziella Ibrahim, (CREAM, CIDsB)
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.

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.
Global Supply Chain and Logistics – I
1:00 – 2:40 pm, Friday, November 5
Session Chair: Dr. Asela Kularatunga

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 at 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. Hernández-González 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 (CILGO). 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.
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.

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 Bachelor's 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, UNIDONCP 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

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.

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.
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, and Computational intelligence.
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 APLL 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 IIESE.

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.

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 (CILTA) 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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Second IEOM Fellows Induction at the IEOM Bangkok Conference on March 6, 2019
University of Monterrey (UDEM), Mexico Visit, May 29-30, 2018
University of Monterrey (UDEM), Mexico Visit, May 29-30, 2018
IEOM Global Council

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) — Soroca Campus
Soroca, 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
Universidad de Monterrey
San Pedro Garza Garcia, NL Mexico
### IEOM Executive Committee

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<th>Position</th>
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<tr>
<td><strong>Director of Membership and Chapter</strong></td>
<td>Professor Donald M. Reimer</td>
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<td>President, Small Business Strategy Group, Detroit, Michigan, USA</td>
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<td>Adjunct Faculty – Lawrence Tech Southfield, Michigan, USA</td>
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<td><strong>Director of Program</strong></td>
<td>Dr. Mohammad Khadem</td>
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<td>Associate Professor Department of Mechanical and Industrial Engineering Sultan Qaboos University Muscat, Oman</td>
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<td><strong>Director of Publication</strong></td>
<td>Dr. Mohammad Anwar Rahman</td>
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<td>Associate Professor Manufacturing and Construction Management Central Connecticut State University New Britain, CT, USA</td>
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<td>Dr. Ahad Ali</td>
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<td>Associate Professor and Director of IE Program, A. Leon Linton Dept. of Mechanical, Robotics and Industrial Engineering, Lawrence Technological University, Southfield, Michigan, USA</td>
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### Competition and Workshop Director

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<td><strong>Competition and Workshop Director</strong></td>
<td>Dr. Saso Krstovski</td>
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<td>Lean Manufacturing Coach</td>
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<td><strong>Associate Program Director</strong></td>
<td>Dr. Annamalai Pandian</td>
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<td>Associate Professor and Director, Bachelor of Science in Engineering Technology Management Department of Mechanical Engineering Saginaw Valley State University Michigan, USA</td>
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<td><strong>Associate Program Director</strong></td>
<td>Dr. Hayder Zghair</td>
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<td>Assistant Teaching Professor of Industrial and Manufacturing Engineering, Pennsylvanian State University, The college: Penn State Berk, PA, USA</td>
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<td><strong>Associate Director of Chapter Development</strong></td>
<td>Dr. Ir. Lina Gozali</td>
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### Operations Manager

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<td><strong>Operations Manager</strong></td>
<td>Dr. Taufiq Islam</td>
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<td><strong>Director of Web Development</strong></td>
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<td>Detroit, Michigan</td>
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<td><strong>Director of Certification</strong></td>
<td>Dr. Joseph M. Ogundu</td>
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<td>President/CEO</td>
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<td>Emerald Global Consulting Inc.</td>
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<td>West Bloomfield, Michigan</td>
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<td><strong>Assistant Program Director</strong></td>
<td>Ms. Rocksana Ahmed</td>
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<td>Senior - BS in Mechanical and Manufacturing Engineering Technology, Lawrence Technological University, Southfield, Michigan, USA</td>
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Upcoming Events

12th 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/

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
Asuncion, Paraguay, May 10-12, 2022

7th North American Conference on Industrial Engineering and Operations Management
June 12-14, 2022, Orlando, Florida, USA
Venue: Holiday Inn & Suites Across from Universal Orlando

5th European Conference on Industrial Engineering & Operations Management
Rome, Italy, July 26-28, 2022
Host: Sapienza – University of Rome

2nd Indian International Conference on Industrial Engineering and Operations Management
August 16-18, 2022, Warangal, India
Host: National Institute of Technology, Warangal
We are the best partner for the organizer who is looking to hold his event in Monterrey, by offering advice and services at no cost in order to facilitate its operation and the achievement of its goals and objectives.

Among the main services offered by the office are:

- Preparation of the application and presentation of the destination.
- Site inspection.
- Operational and logistical advice for the event, as well as tourism in Monterrey.
- Liaison with government agencies and local agencies.
- Contact with qualified suppliers.
- Design of communication and promotion tools for the event.
- Tourist brochures, videos and images of the city.

Contact us and let’s make your next congress, convention, trade show or tournament in the city an extraordinary experience.

Monterrey, Mexico Convention and Visitors Bureau
Tel. (52) 812033 2800
hola@ocvmtymty.com.mx

www.ocvmtymty.com.mx

OCV Monterrey