2nd South American International Conference on Industrial Engineering and Operations Management

Sao Paulo, Brazil, April 5-8, 2021
Sponsors and Partners

Organizer

IEOM Society International, 21415 Civic Center Dr., Suite 217, Southfield, Michigan 48076, USA
Phone: 1-248-450-5660, Email: info@ieomsociety.org
Welcome to the 2nd IEOM Society South American Industrial Engineering and Operations Management Conference, Sao Paulo, Brazil

To All Conference Attendees:

On behalf of the IEOM Society International, we would like to welcome you to Sao Paulo, Brazil and the 2nd South American International Conference on Industrial Engineering and Operations Management, April 5-8, 2021. 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 800 papers/abstracts submitted from more than 50 countries, and after a thorough peer review process, approximately 500 have been accepted. The program includes many cutting-edge topics of industrial engineering and operations management. The theme of the conference is “Operational Excellence in the era of Industry 4.0”.

This conference will address many of the issues concerning continuous improvement for quality and service. Our keynote speakers will address some of these issues:

- Dr. Ximena Córdova Vallejo, Profesora, Colegio de Ciencias e Ingenierías, Politécnico, Universidad San Francisco de Quito, Ecuador
- Daniel Scuzzarello, Vice President and Country Manager, Siemens Digital Industry Software South America, São Paulo, Brazil
- Opening Keynote II: Prof. Dr. Fernando José Barbin Laurindo, Full Professor and Past Department Head, Production Engineering Department, Polytechnic School, University of São Paulo, Sao Paulo, SP, Brazil
- Ricardo Mourad, Regional Operation Director – South America, Valeo, Sao Paulo, SP, Brazil
- João Luís Frare, MBA, Industrial Engineering Executive Manager, Continental Automotive do Brasil Ltda, São Paulo, Brazil
- Cláudio Araujo Rocha, Head of Powertrain Manufacturing LATAM / Powertrain Manufacturing Director (retired), FCA Fiat Chrysler Automobiles LATAM, Brazil
- Edinaldo Fancio, Manufacturing, Engineering & Quality Manager, Eaton Corporation, Valinhos, São Paulo, Brazil
- Dr. Antonio Henriques de Araujo Junior, Professor, Department of Production Engineering, College of Technology, State University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil
- Dr. Antonio Carlos Gomes Junior, Coordenador de Engenharia Mecânica e Centro 4.0 / Assessor Diretoria, Centro Universitário FACENS, Sorocaba, São Paulo, Brazil
- Dr.-Ing. Enzo Morosini Frazzon, Associate Professor, Industrial and Systems Engineering Department, Federal University of Santa Catarina (UFSC), Florianópolis - SC, Brazil
- Marco Santos, MBB, MBA, Master Black Belt, ZF do Brasil, Sorocaba, São Paulo, Brazil
- Fábio Soares Freccia, Head of Corporate Logistics Planning, Volkswagen do Brasil, São Bernardo do Campo, São Paulo, Brazil
- Dr. Jose Luis Guerrero-Cusuman, Associate Professor of Operations and Information Management, McDonough School of Business, Georgetown University, Washington, D.C., USA
- Prof. Eduardo Antonio Modena, Rector/Dean, Federal Institute of Education, Science and Technology, Sao Paulo

The 21st IEOM Society Global Engineering Education session will feature distinguished speakers who will discuss the workforce readiness and engineering education challenges and opportunities. The Industry Solutions and Industry 4.0 will showcase major topics including IoT, AI, data analytics, iCloud, cybersecurity, automation, digital manufacturing, MSV and best industry practices. Six panel sessions have been planned: Global Engineering Education, Supply Chain and Logistics, Lean Six Sigma, Women in Industry and Academia, Project Management and Diversity and Inclusion sponsored by Ford Motor Company.

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

IFSP, Facens, UFSCar and UFSC, conference hosts, welcome all participants. The IEOM Society Conference Planning Committee hopes you will enjoy Sao Paulo and all that it has to offer with its diverse culture, rich history and exceptional cuisine.

Lastly, our sincere best wishes to you all for a successful conference.

Enjoy the conference!
Conference Program

April 5, 2021 (Monday)
08:00 – 09:45 am Parallel Sessions - Rooms 1-6
10:00 – 11:45 am Parallel Sessions - Rooms 1-6
12:00 – 01:45 pm Parallel Sessions - Rooms 1-5
02:00 – 03:45 pm Parallel Sessions - Rooms 1-5
04:00 – 05:45 pm Parallel Sessions - Rooms 1-5
06:00 – 07:00 pm **Keynote I**: Dr. Ximena Córdova Vallejo, Profesora, Colegio de Ciencias e Ingenierías, Politécnico, Universidad San Francisco de Quito, Ecuador – Room 1
07:00 – 08:30 pm Plenary Panel Session on Lean Six Sigma – Room 1

April 6, 2021 (Tuesday)
8:00 – 9:30 am Parallel Sessions - Rooms 1-5
9:45 – 10:00 am **Keynote II (Welcome Address)**: Professor Paulo Roberto Freitas de Carvalho, Director, The Faculdade de Engenharia de Sorocaba – FACENS University, Sao Paulo, Brazil - Room 1
10:00 – 10:40 am **Keynote III (Opening Keynote)**: Daniel Scuzzarello, Vice President and Country Manager, Siemens Digital Industry Software South America, São Paulo, Brazil - Room 1
10:40 – 11:20 am **Keynote IV**: Ricardo Mourad, Regional Operation Director – South America, Valeo, Sao Paulo, SP, Brazil
11:20 – 11:30 am Break
11:30 am – 12:10 pm **Keynote V**: João Luís Frare, MBA, Industrial Engineering Executive Manager, Continental Automotive do Brasil Ltda, São Paulo, Brazil - Room 1
12:10 – 12:50 pm **Keynote VI**: Prof. Dr. Fernando José Barbin Laurindo, Full Professor and Past Department Head, Production Engineering Department, Polytechnic School, University of São Paulo, Sao Paulo, SP, Brazil - Room 1
1:00 – 2:45 pm Parallel Sessions - Rooms 1-5
3:00 – 4:45 pm Parallel Sessions - Rooms 1-5
5:00 – 6:45 pm Parallel Sessions - Rooms 1-5
7:00 – 8:30 pm Plenary Panel Session on Global Engineering Education – Room 1

April 7, 2021 (Wednesday)
8:00 – 9:30 am Parallel Sessions - Rooms 1-5
9:45 – 10:00 am **Keynote VII (Welcome Keynote)**: Prof. Eduardo Antonio Modena, Rector/Dean, Federal Institute of Education, Science and Technology, Sao Paulo - Room 1
10:00 – 10:40 am **Keynote VIII**: Cláudio Araújo Rocha, Senior Consultant of D&L Associates. Head of Powertrain Manufacturing LATAM / Powertrain Manufacturing Director (retired), FCA Fiat Chrysler Automobiles LATAM, Brazil
10:40 – 11:20 am **Keynote IX**: Edinaldo Fancio, Manufacturing, Engineering & Quality Manager, Eaton Corporation, Valinhos, São Paulo, Brazil - Room 1
11:20 – 11:30 am Break
11:30 am – 12:10 pm **Keynote X**: Dr. Antonio Henriques de Araujo Junior, Professor, Department of Production Engineering, College of Technology, State University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil - Room 1
12:10 – 12:50 pm **Keynote XI**: Dr. Antonio Carlos Gomes Junior, Coordenador de Engenharia Mecânica e Centro 4.0 / Assessor Diretoria, Centro Universitário FACENS, Sorocaba, São Paulo, Brazil - Room 1
1:00 – 2:45 pm Parallel Sessions - Rooms 1-5
3:00 – 4:45 pm Parallel Sessions - Rooms 1-5
5:00 – 6:30 pm Parallel Sessions - Rooms 1-5
7:00 – 8:30 pm Plenary Panel Session on Supply Chain Management and Logistics – Room 1

April 8, 2021 (Thursday)
8:00 – 9:30 am Parallel Sessions - Rooms 1-5
9:45 – 10:00 am Welcome Message from Conference Chairs - Room 1
10:00 – 10:40 am **Keynote XII**: Dr.-Ing. Enzo Morosini Frazzon, Associate Professor, Industrial and Systems Engineering Department, Federal University of Santa Catarina (UFSC), Florianópolis – SC, 88040-900, Brazil - Room 1
10:40 – 11:20 am **Keynote XIII**: Marco Santos, MBB, MBA, Master Black Belt, ZF do Brasil, Sorocaba, São Paulo, Brazil
11:20 – 11:30 am Break
11:30 am – 12:10 pm **Keynote XIV**: Mr. Fábio Soares Freccia, Head of Corporate Logistics Planning, Volkswagen do Brasil, São Bernardo do Campo, São Paulo, Brazil - Room 1
12:10 - 12:50 pm **Keynote XV**: Dr. Jose Luis Guerrero-Cusuman, Associate Professor of Operations and Information Management, McDonough School of Business, Georgetown University, Washington, D.C., USA - Room 1
1:00 – 2:45 pm Parallel Sessions - Rooms 1-5
3:00 – 4:45 pm Parallel Sessions - Rooms 1-5
5:00 – 6:30 pm Plenary Panel Session on Diversity and Inclusion sponsored by Ford Motor Company – Room 1
7:00 – 9:00 pm CONFERECE AWARDS CEREMONY – Room 1
Keynote Speakers

April 5, 2021 (Monday)

6:00 – 7:00 pm, Monday, April 5, 2021 – Keynote I

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.

April 6, 2021 (Tuesday)

9:45 am – 10:00 am, Tuesday, April 6, 2021 – Keynote II (Welcome Keynote)

Professor Paulo Roberto Freitas de Carvalho
Director
FACENS University
Sorocaba, Sao Paulo, Brazil

Born in June, 1951, with elementary and high school courses in Sorocaba, having received several awards such as the best student in school. In 1968 was granted a scholarship by AFS- American Field Service International Scholarships and spent his senior high school year in Worthington High School, Ohio, USA, graduating in 1969.

Graduated in Electrical Engineering, with emphasis in Digital Electronics, in the University of Sao Paulo- USP- in Dec. 1974. Later completed post-graduation (MBA) in Higher Education Pedagogy by UNIP.

As an internship student in 1973 participated in the software development group of automatic analysis of electrocardiograms, in the Hospital do Servidor Publico de Sao Paulo. In 1974 participated of the software simulation of the electric system of FEPASA – Sao Paulo Railways system, by PRAICE consulting company with orientation of two USP professors. From 1975 to 1979 was a research and development engineer at Engematic in Sorocaba, where he developed digital alarms annunciators and systems for oil industries. He was later appointed as coordinator of the technology transfer program of Hitachi industrial instruments.

In 1979 he started teaching Digital Electronics at FACENS in Sorocaba, where he continued as a professor and head of Electrical Engineering course up to 1984. From 1980 to 2000 worked in Splice Group, starting as Electronics Division manager, then Technology Director, and later V.P, Business Development. During the 80’s main activities were the development of several products for telecom, such as signal analysers, traffic analysers, small PABX, digital telex machine, digital payphones. All with own technology.

During the 90’s, with Brazilian government opening, negotiated several technology transfer and distribution agreements, such as Marconi Italy/UK (optic fibre transmission systems), Allen Telecom US (mobile telephony amplifiers), Converse Israel/US (voice messaging systems). Participated actively in the auction for privatization of mobile telecom in Brazil, where Splice was the only Brazilian winner group (1998).

From Oct.2000 to 2006 became the Operations director for Marconi. This British company decided to have its own factory in Brazil and acquired the corresponding division of Splice. The factory was transferred from Sorocaba/Votorantim to Barueri. In 2005 Marconi was acquired worldwide by Ericsson. In 2006 coordinated the integration of Marconi’s factory with Ericsson’s in Sao Jose dos Campos. From 2007 to 2012 was Superintendent Director at Wobben Windpower, Brazilian subsidiary of German Enercon, leader in the manufacturing of wind electrical converters in Germany.

From 2013 in Facens, initially as vice-director, then director from 2015. Under his leadership Facens acquired the status of university, after reaching maximum evaluation by the Ministry of Education. Since 2012 is part of the Administration Council of FUNDEC, Sorocaba’s Cultural Development Foundation, responsible for the municipal music school and symphonic orchestra. Also, member of the Sorocaba CMCTI- municipal council for science, technology and innovation.
10:00 am – 10:40 am, Tuesday, April 6, 2021 – Keynote III (Opening Keynote)

Daniel Scuzzarello
Vice President and Country Manager
Siemens Digital Industry Software South America
São Paulo, SP, Brazil

Title of Keynote: Digitalization and Industry 4.0 as catalyst for sustainable work

Daniel Scuzzarello studied Mechanical Engineering at Lund Tekniska Högskola, Sweden and completed his Master Degree on optimization of composite structures at Ducati Motor Holding, Italy in 2007. Since the beginning of his career, Digitalization has been a very central topic in his work, Daniel Scuzzarello today is responsible for Portfolio Development and strategy for Siemens Digital Industry Software South America. In his 10 years in Brazil he managed engineering services teams, drove and structured CD-adapco’s operations in South America and nurtured the company’s integration into Siemens in 2016.

10:40 am – 11:20 am, Tuesday, April 6, 2021 - Keynote IV

Ricardo Mourad
Regional Operation Director – South America
Valeo
Sao Paulo, SP, Brazil

ID 928: Integration of the Business Strategy with the Operational Excellence Model

Ricardo Mourad is graduated in Mechanical Engineer at UNESP - Bauru and also in Technology of Precision Mechanics at FATEC - São Paulo. He is postgraduate in Occupational Safety Engineering at USP-São Paulo and Master Degree in Science – Automation in Lean Manufacturing at UNICAMP - Campinas. In the Automotive industry in the last 20 years working for multinational companies, he has occupied different positions in Methods and Processes, Quality, Production, Logistic, Maintenance, Development, HSE, Industrial and General Management. He’s an expert on methods and processes for assembly lines, lean manufacturing, six sigma methodology and techniques of analysis and troubleshooting. During his professional career, he performed several travels for starting new production lines, transferring technology, commissioning new machines, giving and receiving training, participation in different workshops, benchmarking and business meetings in countries like Germany, Slovakia, China, France and USA. He was also an Associate Professor and has taught classes and gave lectures in different Universities. Currently he occupies the position of Regional Operations Director for South America at Valeo – Powertrain Actuators and Sensors Product Group.

11:20 – 11:30 Break

11:30 am – 12:10 pm, Tuesday, April 6, 2021 - Keynote V

João Luis Frare, MBA
Industrial Engineering Executive Manager
Continental Automotive do Brasil Ltda
São Paulo, Brazil

ID 487: Digital Transformation at Continental World - Examples, Barriers and Corporate Strategies

João Frare is a professional with more than 20 years of experience working for companies of the auto parts segment. Currently he is working for Continental Automotive do Brasil being responsible for Industrial Engineering, Manufacturing, Facilities, Maintenance and Plant Energy Management. He has background in Key Account Management, Project Management and Operations. Graduated in Industrial Engineering with MBAs in Industrial Management and Business Administration by Fundação Getulio Vargas – FGV. Professor in post-graduation courses for disciplines like Project Management, Operations Management, People and Leadership, etc., his passion is developing people competences for future, looking for a better world.

12:10 pm – 12:50 pm, Friday, August 28, 2020 - Keynote VI

Prof. Dr. Fernando José Barbin Laurindo
Full Professor and Past Department Head
Production Engineering Department
Polytechnic School, University of São Paulo
Sao Paulo, SP, Brazil

Professor Fernando José Barbin Laurindo is a Full Professor in the Production Engineering Department (USP). He has B.S. Degree in Production Engineering and B.S. Degree in Law from USP, MBA from FGV-SP, MSc in Production Engineering and PhD in Production Engineering from USP. Post-doctoral research in Ingegneria Gestionale in the Politecnico di Milano and Associate Professor Degree from USP. He is the former Head of Production Engineering Department (USP). His research interests are in the following areas: Business Strategy, Information Technology (IT) Strategy and Planning, IT Strategic Alignment, IT Governance, IT Management, Knowledge Management, Competitive Intelligence, Analytics, Innovation, Enterprises Network, Collaboration and Cooperation.
April 7, 2021 (Wednesday)

9:45 – 10:00, Wednesday, April 7, 2021 – Keynote VII (Welcome Keynote)

Prof. Eduardo Antonio Modena
Rector/Dean
Federal Institute of Education, Science and Technology
Sao Paulo, Brazil

Doctoral student of Civil Engineering at the University of Campinas (Unicamp), the rector of the Federal Institute of São Paulo, (IFSP) was a student at the Federal Technical School of São Paulo, where he became Technician in Edifications in 1976. He has been a professor in the area of Civil Construction since 1986. Between 1993 and 1994, he was the coordinator at Federal Technical School of São Paulo (ETFSP). He helped implement campus Caraguatatuba and took over the unit’s educational management.

10:00 am – 10:40 am, Wednesday, April 7, 2021 - Keynote VIII

Cláudio Araujo Rocha
Senior Consultant of D&L Associates
Head of Powertrain Manufacturing LATAM / Powertrain Manufacturing Director (retired)
FCA Fiat Chrysler Automobiles LATAM, Brazil

Claudio Rocha is a senior consultant of D&L associates. He used to be the Head of FCA Powertrain Manufacturing operations in LATAM. He graduated from Electrical Engineering at the Federal Center of Technologic Education, Minas Gerais, Brazil, Masters in Mechanical Engineering from Pontifical Catholic University of Minas Gerais, Brazil. He earned his Masters in Statistical Engineering from General Motors University, USA and Corporate Finance MBA from Getulio Vargas Foundation, Brazil. He is World Class Manufacturing auditor and he has performed WCM’s audits in six countries. He has published two journals and 12 conference papers. He has done many projects for increasing productivity, cost reduction, quality improvement, innovation for business sustainability and processes transfer. His research interests include manufacturing systems modeling, simulation and optimization, intelligent scheduling and planning, artificial intelligence, predictive maintenance, e-manufacturing, and lean manufacturing. He has worked with coaching and mentoring several professionals. He has visited many countries for benchmarking activities. Currently, he is acting as a senior consultant for personalized solutions for processes, project management, knowledge transfer to generate value to customers, value chain mapping to provide the most appropriate solutions, management of activities to implemented strategic solutions, analysis and problem solving, business case analysis, change management, leadership development, transformation of organizational processes into strategic assets of the business contributing to the creation and optimization of processes and increased value perception for customers, cost, value and deadlines optimization, development of Human capital, coaching and mentoring activities.

10:20 am – 11:20 am, Wednesday, April 7, 2021 - Keynote IX

Edinaldo Fancio
Manufacturing, Engineering & Quality Manager
Eaton Corporation
Valinhos, São Paulo, Brazil

ID 930 Industry 4.0 and the New Generational Operational Excellence Challenges and Opportunities

Edinaldo Fancio, graduated on Automation and Control Engineering in 2001, post graduated in Administration at Fundação Getúlio Vargas in 2008. From Machine Operator to Manufacturing Manager, has a history of success in professional growth within a multinational environment in several roles and areas for 28 years. Acted as manager in operational areas, and leading multifunctional teams, with very diversified professional and personal profiles, had a chance to be part of the professional development for different generations Member of the Eaton Forging Global Council, co-leader on the Automation in Eaton Industry 4.0 Global Council has being an active member in the Industry 4.0 practical evolution at a multinational corporation, focused on the use of I4.0 technologies even at unique production environment like Forge Shop.

11:30 am – 12:10 pm, Wednesday, April 7, 2021 - Keynote X

Dr. Antonio Henriques de Araujo Junior
Professor, Department of Production Engineering
College of Technology
State University of Rio de Janeiro
Rio de Janeiro, RJ, Brazil

ID 929 Technological & Engineering Education and the Development of the Brazilian Aeronautical Industry

Dr. Antonio Henrique de Araujo Junior graduated in Germany, as Transportation Engineer in 1979 at the Wuppertaler University. He got, in 2004, his PhD degree, in Industrial Engineering, at the University of Sao Paulo, Brazil. After obtaining postdoctoral fellowships at the Brazilian Aeronautics Institute (ITA), University of Minho and University of Porto, Portugal, he obtained the position of an Associate Professor at the State University of Rio de Janeiro. Dr. Araujo Junior worked 20 years in the automotive industry (Mercedes-Benz)
and 5 years in the Strategic Planning of the Aeronautical Industry (Embraer, Brazil). He has already published over 50 research articles in SCI(E) journals and 12 scientific books.

**April 8, 2021 (Thursday)**

**9:45 – 10:00 am, Thursday, April 8, 2021 – Conference Chairs Remarks**

**10:00 am – 10:40 am, Thursday, April 8, 2021 – Keynote XII**

**Dr.-Ing. Enzo Morosini Frazzon**  
Associate Professor, Industrial and Systems Engineering Department  
Federal University of Santa Catarina (UFSC)  
Florianópolis – SC, 88040-900, Brazil  
*The Future of Production and Logistics Systems: the role of Industry and Academia*


**10:40 am – 11:20 am, Thursday, April 8, 2021 - Keynote XIII**

**Marco Santos, MBB, MBA**  
Master Black Belt  
ZF do Brasil  
Sorocaba, São Paulo, Brazil  
*Operational excellence: contribution of the lean six sigma experts*

Marco Antonio dos Santos Junior is Graduated in Production Engineering from the Grande ABC University, holds an MBA in Business Management from FGV and is a Lean Six Sigma Master Black Belt. He has 24 years of experience in large industries, working in the areas of business excellence, value analysis engineering, project management, production and quality management, process engineering and maintenance, exercising leadership and working on projects of great impact for the company. He worked on 10 LSS projects directly as a member and project leader focused on optimizing operational costs and supporting strategic projects in the purchasing, legal, human resources, manufacturing and quality processes. He currently is the Regional Master Black Belt Regional of the company ZF do Brasil Ltda, coordinating since 2016, 118 teams of Black and Green Belts and maintaining good relationships at all levels of all eight ZF Brazilian plants. He has been teaching since 2015 at the Facens in the areas of production engineering, mechanics and mechatronics, as well as in post-graduate courses.
Dr. Jose Luis Guerrero-Cusumano holds a Ph.D. in Industrial and Mechanical Engineering from the University of Illinois and a Master of Sciences in Statistics from the Mathematics Department of the University of Illinois. He is also an Economics Statistician from the School of Economics Science, Rosario University, Argentina. Jose-Luis Guerrero-Cusumano is a Tenured Associate Professor at the Georgetown University School of Business. Prof. Guerrero-Cusumano has been a member of the faculty at Georgetown since 1989 in the School of Business. He is also the recipient of the Gold Medal for service at Georgetown University. Professor Guerrero-Cusumano was the Academic Director of the Corporate International Master’s at the Georgetown University School of Business (2012-2017). He is former co-Director of the International Institute on Government, Management, and Policy at Georgetown University. In 2008, Professor Guerrero-Cusumano was awarded an Honorary Doctorate, Doctor Honoris Causa in Administration by Ovidius University (Romania). Also in 2008, he was elected Fellow at the Judge Business School, Cambridge University, England. In 2017, he was recognized by the International Institute for Applied Knowledge Management with the Fellow & Distinguished Scholar Award. Among his research areas are Big and Small Data, Data Mining, Text Mining, International Business, Social Responsibility, Business Forecasting, Six Sigma and Quality Improvement.

In 2017, he was the Co-Chair of the international conference on Responsible Organizations in the Global Context. He was also the Deputy Director and Executive Editor of the journal Globalization, Competitiveness and Governability, Spain, 2007-2011. Dr. Guerrero-Cusumano has published over fifty articles in leading journals. Prof. Guerrero-Cusumano has been a member of the faculty at Georgetown since 1989 in the School of Business. He is also the recipient of the Gold Medal for service at Georgetown University. Professor Guerrero-Cusumano was the deputy Director and Executive Editor of the journal Globalization, Competitiveness and Governability, Georgetown University, Spain, 2007-2011. Professor Guerrero-Cusumano was also the Vice-president of the Latin American Foundation for Quality and he is also a founding member of The Multinational Alliance for the Advancement of Organizational Excellence (MAAOE). In February 2004, he was the technical chairperson for the 3rd Latin American Quality Conference held in Managua, Nicaragua. He was also a member of the International think Tank on Quality and Social Responsibility for the American Society for Quality.

He won the Belgian-American foundation research grant 1995, and spent Spring 1995 as a visiting professor at Institut d’Administration et de Gestion (IAG), Université Catholique de Louvain, Louvain-La-Neuve (Belgium) and at Vesalius College (Vrije Universiteit), Brussels. In the fall 1997, Professor Guerrero-Cusumano spent his sabbatical year at Ghent University (The Vlerick School of Business), Ghent, Belgium as an invited professor, where he researched European Quality Certifications for Academic Institutions. In spring 2006, he was invited by Escuela Superior de Administración y Dirección de Empresas (ESADE) in Barcelona, where he spent part of his sabbatical. Professor Guerrero-Cusumano has also lectured widely internationally. He is also a researcher at “Laboratoire de Recherche en Management” (University of Versailles, France) in the area of Comprehensive Management, Quality and Innovation. He has lectured at European Quality Master Program system (Versailles University, France; University of Limerick, Ireland; Tor Vergata University, Rome, Italy; University of Piraeus, Athens, Greece; Universidad Complutense, Madrid, Spain), the Master of Total Quality Management (Vaxjo University, Vaxjo, Sweden), the Master of Quality Management (Hebrew University, Jerusalem, Israel), and the Master of Industrial Engineering (Ghent University, Ghent, Belgium) as an invited professor.

Dr. Guerrero-Cusumano was an examiner for the American National Science Foundation in the areas of "Transformations to Quality Organizations Program", the “Production and Operations Research Program” and “the Innovation and Organizational Change Program”. Also, Professor Guerrero-Cusumano served as an examiner for the American National Research Council in the area of Benchmarking and for Institute of International Education. Internationally, Professor Guerrero-Cusumano was an examiner for the European Foundation for Quality Management (E.F.Q.M.). He is a member of the Consumer Interest Forum of the American National Standards Institute.

He has been an external judge for several Ph.D. thesis defenses for prestigious international universities as well as a reviewer for many publications such as Management Science, the Journal of Multivariate Analysis, Information Sciences, etc. Professor Guerrero-Cusumano has been a plenary speaker in many conferences around the world and has appeared repeatedly in the media, such as America’s Voice, French TV5, National Public Radio, the international Spanish channel Univision, the Voice of America and CNN international and Jim Lehrer’s News Hour. He speaks seven languages fluently (Dutch, English, French, German, Italian, Portuguese, and Spanish).

Mr. Fábio Soares Freccia
Head of Corporate Logistics Planning
Volkswagen do Brasil
São Bernardo do Campo
São Paulo, Brazil
Conference Committee

Honorary Chair
Professor Paulo Roberto Freitas de Carvalho, Director, FACENS University, Sorocaba, Sao Paulo, Brazil

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Dr. Mohd Helmy Abd Wahab, Universiti Tun Hussein Onn Malaysia
Dr. Eduardo Bezerra da Silva CEFET/RJ

Applied Statistics
Dr. Monica Giuliano, Departamento de Ingenieria e Investigaciones Tecnológica de la Universidad Nacional de La Matanza and Instituto de Tecnología e Ingenieria de la Universidad Nacional de Buenos Aires, Argentina

Automation and Robotics
Dr. Chanan Syan, Professor of Production Engineering and Management at University of the West Indies, St Augustine Campus, Trinidad and Tobago
Dr. Marcelo Trentin, Universidade Tecnológica Federal do Paraná, Brazil

Business Management
Dr. Ursula Maruyama, Business Administration Professor at Cefet/RJ – Centro Federal de Educação Tecnológica Ceio Sukow de Fosneca, Rio de Janeiro Area, Brazil

Construction Management
Dr. Romulo N. Ullias, Head of Procurement, Supply Chain and Corporate Services; PayMaya Philippines, Inc. and Full Member; Chartered Institute of Procurement and Supply

Cyber Security
Dr. Keshav Sahne, Associate Professor and Research Scientist, Computer and Information Sciences, Center of Excellence in Information Assurance (CoEIA), King Saud University, Riyadh, Saudi Arabia
Dr. Amjad Gawanmeh, Electrical and Computer Engineering, Khalifa University of Science and Technology, Abu Dhabi, UAE

Data Analytics and Big Data
Prof. Dr. Ing. Enzo Morosini Frazzon is associate Professor at the Industrial and Systems Engineering Department (EPS) of the Federal University of Santa Catarina (UFSC), Florianópolis, Brazil

Decision Sciences
Dr. Johanna Trujillo Diaz, Decanatura de Ingenieria Industrial, Escuela Colombiana de Ingenieria Julio Garavito, Colombia
Dr. Oscar A. Vázquez-Bernal, Universidad Nacional Abierta y a Distancia UNAD – Colombia

Design and Analysis
Dr. Hasham A. Ali ElBialoulta, Post-Doctoral Researcher, Centro de Estudios de Ingeniería (CEPETRO), State University of Campanas- UNICAMP, SP, Brazil

Digital Manufacturing / 3D Printing
Andrino Homrich, Universidade de Santa Cruz do Sul, Brazil

e-Business and Security
Dr. Arthur Coelho Bezerra IBICT/UFRO

Energy
Dr. Carlos A. Mártil Del Rosario, Research Director, CENTRUM PUCP Graduate Business School, Pontificia Universidad Católica del Perú
Dr. Ivan Andres Ramirez – Pinzón, Universidad de los Andes, Bogotá – Colombia

Engineering Economy
Dr. José Aires Trigo UNESARJ (Universidade Estácio de Sá)

Engineering Education
Dr. Mario Chauca, Advisor Reviewer Vice Rectorate Ricardo Palma University, Research REMACYT-CONCYTEC, Peru

Industry Solutions Chairs
Ricardo Alexandre Diogo, Professor Adjunto, PUCPR – Pontificia Universidade Católica do Paraná, Curitiba, Paraná, Brazil

Industry Solutions Chairs
Rodrigo Ruiz, CTO Renato Archer, Campinas, Brazil

Special Track on Industry 4.0
Dr. Sandro Breval, Universidade Federal do Amazonas

Women in Industry and Academia (WIIA) Chairs
Paloma Maria Teresa Martinez-Sánchez, Universidad El Bosque. Engineering Faculty.

Industrial Engineering Program. Postgraduate coordinator on Production and Productivity.
Bogota, Colombia
Dr. Ursula Maruyama, Business Administration Professor at Cefet/RJ – Centro Federal de Educação Tecnológica Ceio Sukow de Fosneca, Rio de Janeiro Area, Brazil

Publication Chair
Dr. Mohammed Rahman, Central Connecticut State University, USA

Sponsors and Exhibitors Chair
Professor Don Reimer, Lawrence Technological University, Southfield, Michigan, USA

Track Chairs

Artificial Intelligence (AI)
Dr. Luiz Pinheiro da Guia, Professor, Centro Federal de Educación Tecnológica de Minas Gerais – CEFET-MG, Brasil
Dr. Marco Antonio Barbosa Braga CEFET/RJ, Brazil

Business Management
Dr. Álvaro Emilio Cardoso Junior, Instituto Tecnológico de Aeroespacial, São José dos Campos, SP, Brazil

Construction Management
Dr. Lauro Enciso Rodas, Universidad Nacional de San Antonio Abad del Cusco, Cusco, Peru

Cyber Security
Dr. Haifat Saleem, Associate Professor and Research Scientist, Computer and Information Sciences, Center of Excellence in Information Assurance (CoEIA), King Saud University, Riyadh, Saudi Arabia

Data Analytics and Big Data
Prof. Dr. Ing. Enzo Morosini Frazzon is associate Professor at the Industrial and Systems Engineering Department (EPS) of the Federal University of Santa Catarina (UFSC), Florianópolis, Brazil

Decision Sciences
Dr. Johanna Trujillo Diaz, Decanatura de Ingenieria Industrial, Escuela Colombiana de Ingenieria Julio Garavito, Colombia
Dr. Oscar A. Vázquez-Bernal, Universidad Nacional Abierta y a Distancia UNAD – Colombia

Digital Manufacturing / 3D Printing
Andrino Homrich, Universidade de Santa Cruz do Sul, Brazil

e-Business and Security
Dr. Arthur Coelho Bezerra IBICT/UFRO

Energy
Dr. Carlos A. Mártil Del Rosario, Research Director, CENTRUM PUCP Graduate Business School, Pontificia Universidad Católica del Perú
Dr. Ivan Andres Ramirez – Pinzón, Universidad Sergio de Arboleda, Bogotá – Colombia

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Conference Committee

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2nd South American Conference
April 5-8, 2021
8:00 – 8:20 (Tuesday) – Room 1

Dr. Mario Chauca
Advisor reviewer vice-rectorate of research and
Researcher Professor at Ricardo Palma University
Santiago de Surco, LI 15039, PERU
Researcher of the RENACYT-CONCYTEC
Executive Committee Member IFEES (2019-2021)
Past Director Kenshu Kiokay del Peru-AOTS
Past Steering Committee Member IEEE MWSCAS

Title: Project Based Learning using successive repetitions in engineering education

Mario Chauca is Executive Committee Member IFEES (2019-2021), was a Director of the AOTS-Kenshu Kiokay-Peru (2010-2014), member of the technical committees since 2010, invited by the University of Washington IEEE, in 2010 joined the Steering Committee of the IEEE-MWSCAS, and has participated in more than 30 committees in the European Union, Asia, Africa, America and Australia. All event proceedings are indexed in Scopus, journals and others database.

Chauca was participant as speaker and Chair Session at WEE2019-Chennai (India), IEM2019-Toronto (Canada), WEEF2018-Albuquerque (USA), ICIMA2018-Penang (Malaysia), WEEF2017-Kuala Lumpur (Malaysia), CONeGOV2016-Florinopolis (Brazil), ISIT2014,17-Guanajuato (Mexico), MWSCAS2010-Washington (USA), JAIIIC2009-Mar del Plata (Argentina), CONIELECOMP2007,9,10-Puebla (Mexico), SIIE2004-Santa Clara (Cuba). He obtained a scholarship from the AOTS Tokyo (Japan), from the NIPA and Ministry of Science, ICT and Planning of the Future of Korea Seoul (Korea). He is a Consultant in Information and Communication Technologies, he was consultant in the project of United Nations-Inter-American Development Bank-Congress of the Republic of Peru and the Ministry of the Interior of Peru. He is a researcher by RENACYT-CONCYTEC in the Peruvian Government, adviser first award paper CONEIMERA2018, adviser of the First General Award Project for more than 5000 projects in the contest from the Romero Group, adviser for first projects in congress INTERCON, CONEIMERA, and was nominated for the Graña y Montero Prize for Research in Peruvian Engineering. Nominated Peruvian Research Southern Prize 2019 and nominated research award 2018 MEXICO. As author and advisor of papers he has more than 50 letters of acceptance, served organizer of international academic events, editor of proceedings, and advisor to the IEEE chapters at the National University of Callao and the Ricardo Palma University. He teaches at the postgraduate and undergraduate level, with 30 years of experience. He graduated as an Electronic Engineer from Ricardo Palma University in Lima Peru, obtained his Master’s Degree in Business Administration with a mention in “Business Management” and his Doctorate in Education from San Luis Gonzaga National University.

8:20 – 8:40 (Tuesday) – Room 1

Prof. Dr. Sanderson Barbalho, PMP
Coordinator of Process, Projects and Innovation Research Group of University of Brasilia (GIPPP)
Associate Professor of Operations Management Department (EPR)
Researcher of the Master and Doctorate Program of Mechatronic Systems (PPMEC)
Researcher of the Professional Master in Technology Transfer and Innovation (PROFINIT)
University of Brasilia (UnB)
Brasilia, Brazil

Title: Practices for teaching entrepreneurship in undergraduate engineering courses by means of project-based learning approaches

Prof. Dr. Sanderson Barbalho, PMP received the bachelor’s degree in electrical engineering and master’s degree in operations management from the Federal University of Rio Grande do Norte, Natal, Brazil, and the Ph.D. degree in new product development from the University of São Paulo, Brazil, in 2008. Worked as a development engineer and after PMO manager in a high-tech aerospace Brazilian company from 2003 to 2012. Dr. Barbalho is a Professor with the University of Brasilia, Brazil since August 2012, and a Project Management Professional (PMP) since July 2009.

8:40 – 9:00 (Tuesday) – Room 1

Prof. Msc. Gustavo dos Santos De Lucca
Coordinator of Cocreation Lab SATC and Computer Engineering Coordinator
SATC – Associação Beneficente da Indústria Carbonifera de Santa Catarina
Bairro Universitário
Criciúma/SC, Brasil

Title: Creative Entrepreneurship – A method to improve entrepreneurship to pre-incubator, incubator and classroom’s College

Prof. Msc. Gustavo dos Santos De Lucca is a PhD student at PPG3M by UFRGS with research development in the area of Industry 4.0. He has a degree in Computer Science, a postgraduate degree in Information Security. He served as an Information Technology manager for nine years leading teams. He is currently Coordinator of the Computer Engineering Course. He acts as a member of the Innovation Hub HUB facilitating the development of connections for innovation initiatives across all innovation products such as CoLearning and Cobusiness. He coordinates the LUPA-Computer Engineering Laboratory acting as a leader in more than 10 Research and Development projects including Mobile Systems, Artificial Intelligence, Big Data, among others. Founding member of Ada Lovelace Technology Solutions and Darwin Health Intelligent.
9:00 – 9:20 (Tuesday)

Ricardo Alexandre Diogo
Professor Adjunto
PUCPR – Pontifícia Universidade Católica do Paraná
Curitiba, Paraná, Brazil

Title of the Talk: Modernization of Undergraduate Education Program (PMG)

Ricardo Alexandre Diogo holds a BSc in Mechatronics Engineering (PUCPR), Master in Industrial & Systems Engineering (PUCPR), and now is a PhD candidate in Knowledge Engineering & Management (UFSC). At PUCPR, Ricardo is conducting a very challenge project for Engineering Education in Brazil with the support of The Fulbright Commission in Brazil, the Brazilian Ministry of Education, through CAPES, Brazilian Federal Agency for Support and Evaluation of Graduate Education, the U.S. Embassy in Brasilia, and the National Council of Education. The project is called Modernization of Undergraduate Education Program (PMG). At PUCPR he was the Mechatronics Engineering head for eight years (2012-2019). Now he teaches in the Polytechnic School for the following undergraduate programs: Mechatronics Engineering, Industrial Engineering and Mechanical Engineering. He teaches some courses in Industry 4.0 Engineering and Management graduate program too. Nowadays, he is the past-president and current director of International Society of Automation – Curitiba Section, Board Member of the Specialized Chamber in Electrical Engineering of the Regional Council of Engineering and Agronomy of Parana, and Leader in the Workforce Workgroup from Brazilian Society for Industrial Internet (ABII). His topics of interest in research are: Engineering Education, Digital Transformation (Industry 4.0), Knowledge Engineering and Knowledge Management.

9:20 – 9:40 (Tuesday)

Dr. Francisco I. Giocondo César
Professor, Department of Industrial Engineering
Federal Institute of Education, Science and Technology of São Paulo (IFSP – Campus Piracicaba)
Professor & Researcher Collaborator
Production Engineering Graduate Program
Campinas State University (FCA – UNICAMP – Campus Limeira)
Brazil

Session II: Global Engineering Education
1:00 – 2:40 pm (Tuesday) – Room 1

Session Chair: Dr. Boris Herbas, Universidad Catolica Boliviana San Pablo Regional Cochabamba, Cochabamba, Bolivia

1:00 – 1:20 (Tuesday)

Dr. Augusto Loureiro da Costa
Associate Professor
Department of Electrical Engineering
Programa de Post-graduate Engenharia Elétrica
UFBA – Federal University of Bahia
Ondina, Salvador – State of Bahia, Brazil
Visiting Scholar – University of Pennsylvania, USA

1:20 – 1:40 (Tuesday) – Room 1

Mariana Tafur, PhD
Assistant Professor
School of Education – CIFE
Los Andes University
Bogotá, Colombia

1:40 – 2:00 (Tuesday) – Room 1

Dr. Alberto Un Jan
Dean, Faculty of Engineering
Universidad Wiener in Lima
Peru

2:00 – 2:20 (Tuesday) – Room 1

Dr. Boris Herbas
Full Time Professor and Researcher
Professor of Manufacturing Engineering and Professor of Statistics
Universidad Catolica Boliviana San Pablo Regional Cochabamba
Cochabamba, Bolivia

ID 491 Teaching Work Measurement Through Origami in Developing Countries

Boris Christian Herbas-Torrico was born in Cochabamba, Bolivia. In 2002 he graduated with honors as B.S. in industrial engineering from the Universidad Mayor de San Simón in Cochabamba, Bolivia. From 2002 to 2007, he worked as a quality manager, operations manager, and quality consultant for different Bolivian firms. In 2007 he was awarded the prestigious Monbukagakusho Scholarship offered by the Japanese Ministry of Education, Culture, Sports, Science, and Technology by the Japanese Ministry of Education, Culture, Sports, Science, and Technology. Afterward, he pursued his master’s and doctoral studies at the Tokyo Institute of Technology (Japan). During the duration of his graduate studies in Japan, in 2012 for one of his doctoral studies, he was awarded by the Japanese Society of Quality Control with the “Research of the Year Award”. In 2013 he graduated with a Ph.D. in Industrial Engineering and Management. In 2013, he was awarded by the Japanese Society of Engineers and Scientists of Japan with the Nikkei Quality Control Literature Prize (Nikkei Keizai Shimbun) for one of his research studies. In 2013, he was also recognized by the Universidad Mayor de San Simón for his outstanding work internationally. In 2018 he was recognized by the Bolivian Senate for his contributions to
science and technology to the country. The same year one of his studies was awarded by the Bolivian Central Bank. In 2019 another of his studies was also awarded the Plurinational Prize of Science and Technology. In the same year, he became a “Visiting Researcher” in the School of Commerce at Waseda University (Tokyo, Japan). He currently serves as a lecturer and researcher in Industrial Engineering at the Bolivian Catholic University in Cochabamba (Bolivia). He is the founder and director of the Industrial Engineering Research Group and the Financial Engineering Research Group at his university. Additionally, he leads research of local and global interest with researchers from Bolivia and different countries. He is an international lecturer and has made presentations of his research in academic congresses in countries such as Japan, the U.S., India, South Korea, Chile, Ecuador, Panama, etc. He has written two books and his research has been published in prestigious journals in the U.S., Europe, and Japan. Besides, he is a reviewer and member of different editorial committees in national and international journals and conference committees. His research interests are related to customer satisfaction, quality control, statistical modeling, student attrition, consumer psychology, and culture. His hobbies are literature, traveling, and photography.

2:20 – 2:40 (Tuesday) – Room 1

Professor Juan José Encina Cabrera
Director of the Department of Electricity
Faculty of Engineering
National University of Asuncion of Paraguay
San Lorenzo – Paraguay

Session III: Global Engineering Education
3:00 – 4:40 pm (Tuesday) – Room 1

Session Chair: Antonio Carlos Gomes Junior, FACENS University, Sorocaba, São Paulo, Brazil

3:00 – 3:20 (Tuesday) – Room 1

Dr. Hernán Nina Hanco
Professor, Department of Computer Engineering
Master in Administration and Systems and Computer Engineering
National University of San Antonio Abad
Cusco, Peru

3:20 – 3:40 (Tuesday) – Room 1

Dr. Lilian Adriana Borges
Senior Lecturer and Research Coordinator
Pro-vice-chancellor’s Office for Research
UNIDAVI – Universidade para o Desenvolvimento do Alto Vale do Itajai
Rio do Sul, Brazil

ID 747: The Agri-Innovation as Part of the Curriculum in Higher Education: Status and Future Opportunities

Dr Lilian Adriana Borges received her PhD in Manufacturing Engineering and Operations Management from the University of Nottingham in the United Kingdom. She has extensive teaching, research and industrial experience in international business and operations management and strategy. Dr Borges is the Research Coordinator at Unidavi (Brazil) and part of the Pro-vice-chancellor’s office for Research, Community Relations and Innovation. Her research interests include healthcare operations and performance, medical technology and innovation, food supply chain sustainability and operations strategy.

3:40 – 4:00 (Tuesday) – Room 1

Dr. Augusto Rocha
Associate Professor
Universidade Federal do Amazonas
Manaus, Amazonas, Brazil

4:00 – 4:20 (Tuesday) – Room 1

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.

4:20 – 4:40 (Tuesday) – Room 1

Antonio Carlos Gomes Junior
Engineering Professor
Director Advisor / Mechanical Eng. Coordinator
FACENS University
Sorocaba, São Paulo, Brazil
Session IV: Global Engineering Education / Entrepreneurship Education Panel
7:00 – 8:30 pm (Tuesday) – Room 1

Panel Chair

Ricardo Alexandre Diogo
Professor Adjunto
PUCPR - Pontificia Universidade Católica do Paraná
Curitiba, Paraná, Brazil

Ricardo Alexandre Diogo holds a BSc in Mechatronics Engineering (PUCPR), Master in Industrial & Systems Engineering (PUCPR), and now is a PhD candidate in Knowledge Engineering & Management (UFSC). At PUCPR, Ricardo is conducting a very challenge project for Engineering Education in Brazil with the support of The Fulbright Commission in Brazil, the Brazilian Ministry of Education, through CAPES, Brazilian Federal Agency for Support and Evaluation of Graduate Education, the U.S. Embassy in Brasilia, and the National Council of Education. The project is called Modernization of Undergraduate Education Program (PMG). At PUCPR he was the Mechatronics Engineering head for eight years (2012-2019). Now he teaches in the Polytechnic School for the following undergraduate programs: Mechatronics Engineering, Industrial Engineering and Mechanical Engineering. He teaches some courses in Industry 4.0 Engineering and Management graduate program too. Nowadays, he is the past-president and current director of International Society of Automation – Curitiba Section, Board Member of the Specialized Chamber in Electrical Engineering of the Regional Council of Engineering and Agronomy of Parana, and Leader in the Workforce Workgroup from Brazilian Society for Industrial Internet (ABII). His topics of interest in research are: Engineering Education, Digital Transformation (Industry 4.0), Knowledge Engineering and Knowledge Management.

Panel Speaker I

Dr. Lorena Bearzotti
Profesor Auxiliar
Escuela de Transporte
Pontificia Universidad Católica de Valparaíso
Valparaíso, Chile

Panel Speaker II

Keshav Nandurkar, PhD
Professor & Principal
K.K. Wagh Institute of Engineering Education & Research
Nashik, India
Member of Academic Council of Savitribai Phule Pune University, India

Keshav Nandurkar is Professor and Principal of K.K.Wagh Institute of Engineering Education & Research, Nashik, India. He is also Chairman, Board of Studies (Production & Industrial Engineering) at Savitribai Phule Pune University, India. He earned his B.E. in Production Engineering from Walchand Institute of Technology, Solapur, Masters in Production Engineering with specialization in Industrial Engineering and Management from V. J. Technical Institute, Mumbai and Ph.D. in Mechanical Engineering from Indian Institute of Technology Bombay, India. Dr. Keshav started his career as lecturer in Production Engineering at K. K. Wagh College of Engineering Nashik in 1988 and was promoted as Head of Department (2000) and later on as Principal of the institute (2004). He is also member of Board of Directors of K.K. Wagh Education Society which runs several schools and colleges in the state of Maharashtra. He received "Engineering Achievement" award from The Institution of Engineers (India) Nashik Local Chapter, award of "Excellence in Institutional Leadership" during the State Annual Convention of Indian Society for Technical Education (Maharashtra-Goa Section). He also received "Best Principal of the year" award from Computer Society of India, Mumbai Chapter. He has published two book chapters, 32 journal papers and 82 conference papers. His research interests include manufacturing systems modelling, simulation and optimization, facilities planning, Quality Management and IoT based manufacturing. He has successfully advised five doctoral students and ten Masters students. Dr. Keshav has successfully arranged two international conferences in the field of Manufacturing Excellence. He was also Convener of the National Conference on "Exploring new dimensions in Teaching-Learning for quality education" organized in India. He has delivered over 50 invited talks in various events. Dr. Keshav has visited 8 countries for professional events. He is a member of IE(I), ISTE, ORSI, IIPE, IIIE and CSI.

Panel Speaker III
Dr. Esther Matemba  
Engineering Education Advisor- Lassonde Educational Innovation Studio (LEIS)  
Lassonde School of Engineering, York University, Canada  
Governing Board Member for Research in Engineering Education Network (REEN) - Africa representative  
Sessional Academic, Curtin University, Western Australia  

Esther Matemba is an engineering lecturer and an active engineering education researcher. She is currently working as an Engineering Education Advisor for Lassonde Educational Innovation Studio (LEIS) at York University. Her previous Engineering Education research experience include a Research Assistant role at Curtin University (2015), and a Research Associate role at the University of Western Australia (Feb 2019 – Aug 2019). Esther is a Governing Board Member of Research in Engineering Education Network (REEN) representing Africa region. She has a PhD in Engineering Education from the Department of Civil Engineering at Curtin University, Australia. Her PhD titled ‘Globalisation of engineers: African Professional Engineering Education Perspective’, focused on issues of developing curriculum for globalisation with a particular interest on Africa. Esther also holds a Masters of Science in Civil Engineering (2007) from the University of Dar es Salaam, Tanzania, where she also lectured for five years. She is a co-founder of a project called ‘Collaboration and Method Sharing for engineering educators’, founded in 2015, with the purpose of sharing student centred methods to engineering educators in Africa. Esther’s research interests include curriculum for global engineers in the Global South, engineering competencies, international accreditation and African engineering education, and her work appears in different international conferences and journals.

Panel Speaker IV

Professor Donald M. Reimer  
Director of Membership and Chapter Development – IEOM Society  
President, The Small Business Strategy Group, Detroit, Michigan, USA  
Adjunct Faculty – A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering  
Lawrence Technological University, Southfield, Michigan, USA  

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

Session V: Global Engineering Education  
8:00 – 9:40 am (Thursday) – Room 1  
Session Chair: Dr. Sepideh Abolghasem, Department of Industrial Engineering, Universidad de los Andes, Bogota, Colombia  

8:00 – 8:20 (Thursday) – Room 1  
Dr. Gilson Ditzel Santos  
Professor in Management Sciences  
Universidade Tecnológica Federal do Paraná  
Pato Branco Area, Brazil  

8:20 – 8:40 (Thursday) – Room 1  
Dr. Diogo Aparecido Lopes Silva  
Coordenador Pedagógico do MBS UFSCar  
Adjunct Professor  
UFSCar – Federal University of São Carlos  
Sorocaba, São Paulo, Brazil  

8:40 – 9:00 (Thursday) – Room 1  
Dr. Rodrigo Zarate  
Dean (Decano), School of Administration, Finances and Economics  
Professor of Leadership and Management  
Universidad EAN  
Bogotá, Colombia  

9:00 – 9:20 (Thursday) – Room 1
Dr. Sepideh Abolghasem  
Assistant Professor  
Department of Industrial Engineering  
Universidad de los Andes  
Bogota, Colombia

9:20 – 9:40 (Thursday) – Room 1

Dr. Luiz Carlos de Abreu Rodrigues  
Professor Associado e coordenador do curso de Engenharia Mecatrônica  
Universidade Tecnológica Federal do Paraná  
Curitiba, PR, Brasil

Session VI: Global Engineering Education  
1:00 – 2:40 pm (Thursday, April 8) – Room 1  
Session Chair: Hernan Nina, Universidad Nacional de San Antonio Abad del Cusco, Cusco, Perú

1:00 – 1:20 (Thursday, April 8) – Room 1

Professor Randal Victor Gibbin  
Founder at Critério Lógico Inteligência Empresarial & Consultoria  
Postgraduate Professor – Facens University  
Sorocaba, São Paulo, Brazil

Gaming on academic and organizational education environments, the experience of Design Thinking Day – DTDay

1:20 – 1:40 (Thursday, April 8) – Room 1

Dr. Alessandro Augusto Jordão  
Professor e Coordenador do Curso de Engenharia de Produção e Engenharia – Ciclo Básico  
Universidade Paulista  
Sorocaba, SP, Brazil

1:40 – 2:00 (Thursday, April 8) – Room 1

Dr. Sam da Silva Devincenzi  
Professor de Engenharia de Software  
Universidade Federal do Pampa  
UNIPAMPA – Campus Alegrete  
Alegrete, RS, Brasil

2:00 – 2:20 (Thursday) – Room 1

Dr. Hernan Nina  
Professor of Computer and System Engineering  
Carrera Profesional de Ingeniería Informática y de Sistemas  
Universidad Nacional de San Antonio Abad del Cusco  
Cusco, Perú

ID 495 Digital Media for Internal Communication within Higher Education

Hernan Nina is Professor at Universidad Nacional de San Antonio Abad del Cusco and part-time professor at Universidad de Lima, Peru. His research interests include software engineering, innovation in higher education, and human-computer interaction. He was qualified as a researcher from CONCYTEC, Peru. He is Dr. in System Engineering from Universidad Nacional Federico Villarreal (UNFV), Peru. He has a Master in Informatic with mention in Software Engineering from Pontificia Universidad Católica del Perú (PUCP). He has a Master of Administration from Universidad Nacional de San Antonio Abad del Cusco (UNSAAC), Perú. He has a BSc degree in Informatics and System Engineering from UNSAAC. He is a member of IEEE and a member of ACM.
Session VII: Global Engineering Education
3:00 – 4:40 pm (Thursday, April 8) – Room 2
Session Chair: Dr. Jesus Francisco Vargas Bonilla, Dean, School of Engineering, University of Antioquia, Medellín, Colombia

Dr. Ramiro Jordan
Associate Dean of Engineering, Global Initiatives
University of New Mexico
Albuquerque, New Mexico
Past President IFEEs: 2018-2020

Dr. Ramiro Jordan is a scientist, innovator, educator and entrepreneur. He is a faculty member of the Electrical and Computer Engineering (ECE) department at the University of New Mexico, and is currently the Associate Dean of Engineering for International Programs. His research activities include sustainability, Smart Grid, cognitive radio, multi-dimensional signal processing, and software development.

Dr. Jordan is a founder of the Ibero-American Science and Technology Education Consortium (ISTEC), a successful non-profit organization that was created in 1990 with the mission to accelerate STEM education, R&D and entrepreneurship in Latin America and the Iberian Peninsula. ISTEC is comprised of over 100 educational, research, industrial, and multilateral organizations throughout the Americas and Iberia, and is now reaching into the global arena.

Dr. Jordan is a recognized leader in his field and serves on the Board of Directors of several industrial and professional organizations. He served as Vice President for the Americas Region and is currently in the Executive Committee of the International Federation of Engineering Education Societies and is VP for the Americas. He has been involved in the creation and enhancement of over 12 international Technology Parks and has fostered entrepreneurial activities worldwide. He was the Executive Vice-president and Chief Development Officer for Gridline Communications Holdings, Inc. a startup company.

Dr. Jordan obtained his MS and Ph.D. in Electrical and Computer Engineering from Kansas State University in 1984 and 1987 respectively, and the degree of Telecommunications Engineer at the Universidad Nacional de La Plata in 1981.

3:45 – 4:15 (Thursday, April 8) – Room 1

Dr. Jesus Francisco Vargas Bonilla
Dean, School of Engineering
University of Antioquia
Medellín, Colombia

3:15 – 5:00 (Thursday, April 8) – Room 2

Dr. David E. Goldberg
President and Head Coach
ThreeJoy Associates, Inc.—Transforming Engineering Education
Douglas, Michigan, United States
Jerry S. Dobrovolny Distinguished Professor Emeritus, University of Illinois at Urbana-Champaign

ID 927 Rapid, Effective Educational Change without Tears: Using 4 Sprints & 4 Spirits to Transform Engineering Education for a Creative Era

David E. Goldberg (Dave) is an artificial intelligence pioneer, engineer, entrepreneur, educator, and trained leadership coach (Georgetown). He taught engineering at Michigan, Alabama, and Illinois for 27 years, and as an academic, was known for his work in artificial intelligence (AI), particularly genetic algorithms and evolutionary algorithms, amassing an h-index h=109 (here), including 5 authored texts, a number of edited volumes, and the highly cited Genetic Algorithms in Search, Optimization, and Machine Learning (Addison-Wesley, 1989). During his career he co-founded a Silicon Valley startup (www.sharethis.com), 3 academic conferences, including one combining philosophy & engineering, and an educational transformation incubator.

In 2010, Dave resigned his distinguished professorship and tenure at Illinois to go out into the world to help transform higher education as a result of the surprising success of the iFoundry (Illinois Foundry for Innovation in Engineering Education) initiative at the University of Illinois at Urbana-Champaign (UIUC). Bootstrapped in 2007 in reaction to a suggestion to form yet another faculty committee to “study” engineering education, Dave refused the committee assignment and instead took immediate action and formed and led iFoundry as a bottom-up incubator for educational change. The off-the-books effort was made an official college activity in 2008 and it successfully elevated Illinois’s educational culture, giving faculty permission to work for educational change and giving students reason to expect more engaging & unleashing educational experiences.

Dave now heads www.ThreeJoy.com, a coaching & change leadership firm for higher education, and www.BigBeacon.org, a 501(c)3 non-profit corporation devoted to transforming engineering education around the globe. His most recent book, A Whole New Engineer: The Coming Revolution in Engineering Education, is changing engineering education norms and practices around the world. Dave is working on A Tiny Book for a Whole New Education (expected Q3 2021) to better describe the 5 shifts & 4 sprints and spirits needed for the higher education of humans in a world full of increasingly competent artificial intelligence (AI).
## Submissions and Participants from Countries and Territories

<table>
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## Sponsors and Partners

![List of sponsors and partners images]
Industry 4.0 - Distinguished Speakers

Wednesday, April 7, 2021

Session I: Industry 4.0 – Robotics and Automation (Room 1) - 8:00 – 9:30 (Wednesday)
Session Chair: Dr. Roberto A. Martins, Federal University of Sao Carlos, Sao Carlos – State of Sao Paulo – Brazil

8:00 – 8:20 (Wednesday) – Room 1

**Luciano Vermaas**
Senior Business Development Consultant
weme
Campinas, Brazil

8:20 – 8:40 (Wednesday) – Room 1

**Ms. Joselyne Andramuño Cando**
Researcher
Universidad Católica de Santiago de Guayaquil
Ecuador

Topic: Embedded systems applied to intelligent control

Ms. Joselyne Andramuño Cando is a thesis student from Universidad Católica de Santiago de Guayaquil – Ecuador. She has participated in three conferences, the first one in IEEE ICA – ACCA 2018 (Chile), the other one LACCEI 2019 (Jamaica) and the last one ChileCon 2019 (Chile). Ms. Cando has papers that are published in IEEE Xplore, Scopus and Web of Science. My paper's titles are: Adaptive Control Implemented with Embedded Systems (2018), Cascade Control Algorithm developed with Embedded Systems(2018), Experimentation with an adaptive waterfall controller with disturbance effect(2019), Industry 4.0 Embedded Systems Network (2019). She is a Peer Review from Publons Academy by Web of Science Group and she has two reviews from papers that are published in IEEE Xplore.

8:40 – 9:00 (Wednesday) – Room 1

**Dr. Alejandro G. Frank**
Associate Professor, Department of Industrial Engineering
Director of the Organizational Engineering Group ( NEO-Núcleo de Engenharia Organizacional)
Chair of Graduate Studies, Industrial Engineering Program
Federal University of Rio Grande do Sul (UFRGS)
Research Affiliate, MIT Industrial Performance Center

Presentation: Industry 4.0 ecosystems – challenges for technology providers

Alejandro Germán Frank is an Associate Professor at the Department of Industrial Engineering of the Federal University of Rio Grande do Sul (UFRGS) and a Research Affiliate at the MIT Industrial Performance Center. At UFRGS, he is the Chair of Graduate Studies — Industrial Engineering Program, and the Director of the Organizational Engineering Group. He received Ph.D. (2013) and M.Eng. (2009) degrees in Industrial Engineering from UFRGS, Brazil, and a B.Eng. degree in Industrial Engineering (2007) from the National University of Misiones (UNaM), Argentina. He has been a visiting scholar at the Massachusetts Institute of Technology (USA), and at Politecnico di Milano (Italy). His research is devoted to the interface between operations and technology management, with emphasis on digital transformation, Industry 4.0, and new business models in manufacturing firms. He also leads, in partnership with MIT IPC, the field research on the relationship between digital technologies and work in Brazilian manufacturing companies, which is part of the MIT Work of the Future Initiative.

9:00 – 9:20 (Wednesday) – Room 1

**Dr. Roberto A. Martins**
Full Professor
Department of Industrial Engineering
Federal University of Sao Carlos
Sao Carlos – State of Sao Paulo – Brazil

Title of talk: Performance Measurement System in Industry 4.0

Dr. Martins is a Full Professor of the Department of Industrial Engineering at the Federal University of Sao Carlos in Sao Carlos, Brazil. He earned his Ph.D. in Industrial Engineering from the University of Sao Paulo, Sao Paulo, Brazil, in 1999. Dr. Martins received his M.Sc. in Industrial Engineering, in 1993, and his B.S. in Industrial Engineering, in 1990, both from the University of Sao Paulo, Sao Carlos, Brazil. Currently, he is an Associate Editor of two leading Brazilian industrial engineering journals, Gestao & Producao and Production. From 2002-06, he was editor-in-chief of Gestao & Producao. From 2010-14, Dr. Martins was a member of the international board of the Society of Engineering and Management System of the Institute of Industrial (SEMS) and Systems Engineers (IISE). From 2018-19, he spent a sabbatical year as International Visiting Scholar at the Foisie Business School (FBS) at the Worcester Polytechnic Institute (WPI) in Worcester, MA, US, developing collaborative research with Dr. Joseph Sarkis on Supply Chain Performance Measurement Systems. Dr. Martins is also authors of many articles, books, and book chapters on Performance Measurement Systems, Supply Chain Performance Measurement Systems, Sustainability Performance Measurement Systems, Research Methodology in Operations Management, and Quality Management. His research interests are on Performance Measurement Systems for Sustainable Supply Chain Management applying the new digital technologies.
Nancy Velásquez Villagrán  
Director at Industry 4.0 Research & Innovation Center  
Researcher of Industry 4.0 and Industrial Cybersecurity  
Professor of Technology and Information Security  

Title of the talk: Security Key Factors in the Implementation of Industry 4.0  

International Consultant in Industry 4.0 and Cybersecurity. Currently her line of research is the Implementation of Industry 4.0 and Industrial Cybersecurity, leading the projects of Industry 4.0: SH4PM (Predictive Maintenance) and I4CEC (Quality in Customer Experience). She has created and directed the Information Security areas of leading Telecommunications, Retail, and Banking companies in the private and public sectors. Nancy has extensive experience in Information Technology, Technology Services (ITIL) and Project Management (PMP). Specialized in Information Security (ISO 27000) | Cybersecurity (ISO 27032) | Risk Management (ISO 27005, ISO 31000) | Business Continuity Management (ISO 22301).  

Professor in Postgraduate Programs in prestigious Universities. Nancy has written papers on Industry 4.0 and Cybersecurity. She has participated in Iberic-American Science and Technology Projects and has studies in Ecuador, Mexico, Argentina, and Spain.

Session II: Industry 4.0 - 1:00 – 2:40 pm (Wednesday) – Room 1  

1:00 – 1:20 (Wednesday) – Room 1  

Eliane R. Rodrigues  
Managing Partner of Zorfatec Innovation Consultancy  
Researcher of LabEI-UFABC/CAPES  
Factory of the future-Poli/USP, Brazil  

Companies Strategies and Transformation for Maturity in Industry 4.0  

Eliane Message is Director at Zorfatec Technology Innovation Consultancy, University and Post-Graduation Professor with all sort of corporate trainings experience and MSc. and Technology Innovation and Cultural Organization by UFABC (Federal University of ABC). MSc. Eliane Message is Researcher at LabEI (Intrapreneurship and Innovation Laboratory) about: Cultural Innovation, Cultural of Industry 4.0, Industry 4.0, Technology Innovation and Smart Manufacturing. Researcher and speaker of themes, such as: Technology Innovation, Organizational Culture, Industry 4.0, Management of Changings, Management about Business Strategy Planning, Management of People, Purchases and Biddings, Innovational Project Management. MSc. Eliane Message is mentor of startups at “Innovativa” Program and at UFABC and also writer of international papers, books and technical materials.

1:20 – 1:40 (Wednesday) – Room 1  

Professor Walther Azzolini Junior  
University of São Paulo (USP)  
School of Engineering São Carlos (SESC)  
Sao Paulo, Brazil  

Title of the talk: System integration with emphasis on increased manufacturing process productivity in textile industry  

Mechanical Production Engineer (Methodist University of Piracicaba), in 1991, Master in Mechanical Engineering (State University of Campinas (UNICAMP)), in 1996 and PhD in Mechanical Engineering (School of Engineering São Carlos (SESC)) of the University de São Paulo (USP), in 2004. Professor at the School of Engineering São Carlos (University of São Paulo (USP)). Has experience in Production Engineering and Mechanical Engineering, focusing on Computer Simulation of Manufacturing Systems, acting on the following subjects: Production Planning and Control, Operational Research and Computer Simulation. From 2015 to 2019, he was Chairman of the SESC Institutional Project Support Committee. Author of eight books and eight book chapters. He is a Research Group Leader: Industrial Systems Modeling and Simulation Research and Study Group (Infrastructure: Automation and Simulation Research and Education Core (NEPAS / SESC / USP)). Dr. Walther Azzolini Junior is co-author of the book Production Planning and Control – Modeling and Implementation published by Elsevier publishing company (2nd Edition).

1:40 – 2:00 (Wednesday) – Room 1  

Prof. Dr. Renato de Oliveira Moraes  
Depto de Engenharia de Produção  
Escola Politécnica  
Universidade de São Paulo  
San Paulo, Brazil  

New demands to the CIO (Chief Information Officer) brought by new technologies such automation, machine learning, natural language, etc.  

Graduated in Production Engineering from the University of São Paulo (1988) and PhD in Business Administration from the University of São Paulo (2004). He has 27 years of experience in higher education, is a professor at the Department of Production Engineering at the University of São Paulo where he participates in the Information Technology Management group. His research interests include Information System Management, CIO profile, Project Management and Multivariate Data Analysis.
Icaro Gargione
Automation Engineer
SICK
São Paulo, São Paulo, Brazil

Icaro Gargione was born in 1993 in São José dos Campos, SP – Brazil. He received the Mechatronics Technician degree from ETEP in 2010 and the Control and Automation Engineer bachelor's degree from Universidade Federal de Itajuba (UNIFEI) in 2018. During his graduation, he would often build robots with friends. This led them to found Daredevil Robotics, a robotics team at UNIFEI which went on to win prizes at IEEE OPEN challenge. In 2015, he stepped down from the position of team captain to participate in an exchange program abroad. He spent a year in Michigan, USA, studying Robotics Engineering at Lawrence Technological University (LTU). While studying at LTU, he was invited to be part of the Intelligent Ground Vehicle Competition (IGVC). They won second place in the Interoperability Profiles (IOP) Challenge that year. After graduation, he worked at Enable Automacao, a small automation company in São Jose dos Campos, where he was exposed to different manufacture plants. He was then hired by SICK Sensor Intelligence to assist on automation projects and to lead on new Industry 4.0 projects in the company.

2:20 – 2:40 (Wednesday) – Room 1

Regis Ataides
Director, South America Channel
Siemens Digital Industry Software
São Paulo Area, Brazil

Mechanical Engineer and Master of Degree by University of Brasilia (UnB) with MBA in Business Management by Fundação Getúlio Vargas (FGV), Regis worked as Technical Manager for consulting simulation companies in Brazil. He also worked as a Project Manager for SAP implementation at Banco Itau. Regis has been working with digitalization since 2002 and currently is Director of Siemens DISW for South America and Director of events for SAE Brasil - SP Regional.

Session III: Industry 4.0
3:00 – 4:40 pm (Wednesday) – Room 1

Cássio Barbosa
Mechatronic Engineer
Hedro Sistemas Inteligentes
Belo Horizonte, Minas Gerais, Brazil

Dr. Mohammed Khadem
Associate Professor
Department of Industrial Engineering and Engineering Management
University of Sharjah
United Arab Emirates

Mohammed Khadem is working as an Associate Professor at Associate Professor, Department of Industrial Engineering and Engineering Management, University of Sharjah, United Arab Emirates. He was associate professor at Department of Mechanical and Industrial Engineering, Sultan Qaboos University, Muscat, Sultanate of Oman. Dr. Khadem worked at SQU from 2005 to 2020. He received his PhD from University of Wisconsin, Milwaukee, USA in 2004. He received his Master of Science (Mechanical Engineering) degree from the University of South Alabama, USA in 2001.

His research interest lies in the area of Simulation and Optimization, Decision Support System, Intelligent Manufacturing System, Lean Manufacturing, Flexible Manufacturing System, Logistic and Supply Chain, Production Planning and Control. He has published several research papers both in international journals and in conference proceedings.

Carlos Rinck
Coordenador do Curso de Pós- graduação
Facens University
Eng. de Projetos III of Bracell
Sorocaba, São Paulo, Brazil

3:40 – 4:00 (Wednesday) – Room 1

4:00 – 4:20 (Wednesday) – Room 1
Gustavo (Peçanha Lacerda de) Lima  
Solution Business Architect: Industry 4.0 / MES / SCM / ERP / 3D – Strategy & Implementation  
Projeto Otimiza – SLL  
Sao Paulo, Brazil

Lucas Nevado P. de Toledo  
Account Development Engineer – Auto & Tire and CPG – South America  
Siemens PLM Software  
São Paulo, Brazil

Lucas Nevado studied Electrical Engineering at University Center of FEI, Brazil; Split Undergraduation on Electrical Engineering, USA and started his Master’s Degree in Sales at FGV, Brazil. Has always been passionate about technology, IIoT, and Digitalization. Assists his clients in finding solutions to optimize processes, bring a return on investment (ROI) and competitiveness by promoting the Digital Enterprise. As an Account Development Engineer, he is responsible for the expansion strategy for Siemens Digital Industry Software South America in the Automotive and CPG (Consumer Goods) verticals.

Mário Carneiro  
CEO and Founder  
Materializa Tecnologia  
São Paulo, Brazil

Mario Carneiro studied Mechanical Engineering at UFMG, Brazil and completed his MBA on Business Management in 2011 at FIA (Fundacao Instituto Administração). Mario has worked most of his 22 years of career with digital manufacturing, ahead of business development for simulation and test technologies. Actually, Mario is CEO and founder of Materializa Tecnologia, focused on additive manufacturing and innovation for product and process development inside industries.

Ricardo Cassissa Abdala  
Especialista / Consultor de soluções PLM  
Centric Software  
São Paulo, Brazil

Juliana Thomé Atihé  
Materials Coordinator  
MSA – The Safety Company  
São Paulo, São Paulo, Brazil
Leandro Garbin
South America Portfolio Development Manager - Simcenter
Siemens Digital Industries Software
Brazil

Leandro Garbin tooks Mechatronics Engineering in 2005 and a post-graduate degree in Automobile Engineering from FEI, finishing in 2012. He has extensive experience in the area of research and development for the automotive (passenger and commercial vehicles), agricultural and machinery markets. For 3 years he was the Chairperson of the SAE Testes & Simulations Event and is currently part of the board of directors of the São Paulo Section of SAE Brasil. He is currently the Simcenter Portfolio Manager (Tests & Simulations) at SIEMENS Digital Industries Software.

6:20 – 6:40 (Wednesday) – Room 1

André de Oliveira
BT LATAM Delmia Senior Manager
Dassault Systèmes
São Paulo, SP, Brazil

Session V: Industry 4.0 - 3:00 – 4:40 pm (Thursday) – Room 1
Session Chair: Alexander Tostes, Head of I 4.0/Capital Asset Optimization Senior Manager, Deloitte, São Paulo, Brazil

3:00 – 3:20 (Thursday) – Room 1

Daniel Luiz de Mattos Nascimento
BIM and Lean 4.0 Coordinator
CERTI Foundation
Florianópolis, Santa Catarina, Brazil

3:20 – 3:40 (Thursday) – Room 1

Marco Baptista
Americas MOM Channel Leader
Siemens Digital Industries Software
Vitória, Espírito Santo, Brazil

3:40 – 4:00 (Thursday) – Room 1

Jorge D.B. Chagas
Data Scientist
IBM
Campinas, São Paulo, Brazil

4:00 – 4:20 (Thursday) – Room 1
Marcelo Suzuki  
Business Development Specialist (Global Meat Market)  
Siemens  
São Paulo, Brazil

Alexander Tostes  
Head of I 4.0/Capital Asset Optimization Senior Manager  
Deloitte  
São Paulo, Brazil

Carlos Tunes  
Watson IoT Executive – Latin America  
IBM  
São Paulo, Brazil
Continuous Innovation

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Panel Sessions

Women in Industry and Academia (WIIA) Panel

4:00 - 5:45 (Monday), April 5, 2021

Panel Chair

Dr. Isotilia Costa Melo
Department of Production Engineering
São Carlos Engineering School (EESC)
University of São Paulo (USP)
São Carlos (SP) – Brazil

Dr. – Ing. Isotilia Costa Melo holds a Ph.D. in Industrial Engineering at the University of São Paulo (USP). Her thesis' title was “E-Commerce: Compared efficiency of major retailers in Brazil and Canada”, it proposed a tool for performance measure of e-commerce operations (focused on inventory). She is a mentor of the implementations of final projects in MBA in Project Management (USP) and she is also a candidate for the MBA of Digital Business (USP). She holds a Master's Degree in Industrial Engineering (USP), focused measuring on the performance of agricultural supply chains. She holds a Specialization in Welding Engineering (Mauá) and a BSc in Mechanical Engineer and 5-years of experience in the Automotive Industry. Currently, her research interests are E-commerce, Omni-Channel for Retailing and Banking, Valuation, and Digital Transformation. She primarily relies on Data Envelopment Analysis (DEA), Optimal Control Theory (OCT), econometrics, and deep learning techniques to conduct her researches.

ID 270 Women in Postgraduate Programs of Engineering and Natural Sciences: A Case Study in Brazil
Isotilia Costa Melo, Érica Gonçalves Rezende and Daisy Aparecida do Nascimento Rebelatto, Department of Production Engineering, São Carlos Engineering School (EESC)/University of São Paulo (USP), Avenida Trabalhador Sancarlense, 400 – 13566-590 – São Carlos (SP) – Brazil

Panel Speaker I

Jannatun Naher, Ph.D.
Adjunct Assistant Professor
North Carolina Agricultural and Technical State University
Greensboro, North Carolina, United States

Dr. Jannatun Naher is working as an Adjunct Assistant Professor in the Computer Systems Technology Department of North Carolina Agricultural & Technical State University (NC A&T). She received her Ph.D. degree in Electrical Engineering from NC A&T. Her dissertation title was “An Automated design space exploration tool for OpenCL-based implementations on FPGAs using machine learning”. In her Ph.D. dissertation, she developed a design space exploration model using a machine learning approach. She holds a master's degree in Electrical Engineering from South Dakota State University, USA. She received a BS degree in Electrical and Electronics Engineering from Khulna University of Engineering &Technology, Bangladesh. After finishing her bachelor's, she worked in a renowned ISP company in Bangladesh and worked as a Lecturer in AIIC, Bangladesh. Her specialization is on hardware design on FPGAs and machine learning. Her research aims on accelerating data-driven applications like cybersecurity and bioinformatics.

Panel Speaker II

Dr. Noha Mostafa
Assistant Professor in Industrial Engineering
The British University in Egypt
El Sherouk, Cairo, Egypt

Panel Speaker III

Karla Gonzalez
Quality Engineer
Greene Tweed
Houston, Texas, USA

Panel Speaker IV

Lean Six Sigma Panel

7:00 - 8:30 pm (Monday), April 5, 2021
Dr. Joseph M. Ogundu
President/CEO
Emerald Global Consulting Inc.
West Bloomfield, Michigan

Dr. Joseph M. Ogundu is the president /CEO of Emerald Global Consulting Inc., a Farmington Hills, Michigan based consulting firm. Dr. Ogundu has extensive experience in academia, leadership, project management, business process excellence, lean transformation, six-sigma, supply chain management and supplier quality, change management, operations, industrial engineering, manufacturing and process engineering, quality engineering and quality assurance. Dr. Ogundu is a lean practitioner and six-sigma practitioner that sees lean six-sigma as operations management philosophy that is based on the relationship between waste reduction and elimination, quality improvement and operations performance measures.

Dr. Ogundu was Adjunct professor, Industrial and Systems Engineering at both Lawrence Technological University, Southfield Michigan and Oakland University, Rochester Michigan, as well Adjunct Professor: Business Administration, Kettering University, Flint Michigan. He thought courses in both undergraduate and graduate levels and the courses were Lean Systems Application, Quality Assurance and Control, Total Quality Management, Operations Research and Stochastic Processes, Manufacturing Processes, Advanced Quality Planning, Supplier Quality, Business Statistics, Lean Six-Sigma, Production Planning and Control, Materials and Inventory Management and Operations Management. Dr. Ogundu worked in the following industries, Automotive, Oil and Gas, Manufacturing, Consulting, Energy and Health Care. Dr. Ogundu is the author of the book “The Relationship between Types of Waste and Operating Performance Measures.

Dr. Ogundu graduated with a Doctorate Degree in engineering and manufacturing systems, Masters in business administration from Lawrence Technological University, Master's Degree in Manufacturing Engineering from Wayne State University and a Bachelor's Degree in Industrial Engineering from University of Tennessee. Knoxville, Tennessee. Dr. Ogundu spent the earlier years of his career in engineering, leader and senior management positions as director and executive director at Country Coach Inc, process engineering manager at DaimlerChrysler AG, Senior Operations leader at Chrysler Corporation, facilities engineer and project manager at Ford Motor Company and Senior Product Engineer at General Motors Corporation. Dr. Ogundu has served as board member of Lawrence Tech University College of Management Alumni Association, Finer Cabinetry & Woodwork Inc., Citation Plastics, LLC, River State Foundation Inc., as well as Board member of Health Care Management department at South University Novi, Michigan Campus. Also, he served as Vice President of Chapter Development Institute of Industrial Engineers SE Michigan/Toledo Chapter from 1991 to 1992.

Prof. Dr.-Ing. Carlos Hernandez
Instituto de Ingeniería Industrial
Universidad Austral de Chile

"Assembling techniques for micro components with high dimensional variability”.

Dr.-Ing. Carlos Hernández is an industrial engineer and professor in the Institute of Industrial Engineering at Universidad Austral de Chile, Valdivia, Chile. He earned Licentiate Degree in Engineering from Universidad de La Frontera, Temuco, Chile, Master of Sciences in Computational Engineering and Doctor of Engineering from Technische Universität Braunschweig, Brunswick, Germany. Before joining the academia, he developed an international professional career working for large companies (e.g. PriceWaterhouseCoopers, BHP Billiton, and Merck Sharp & Dohme). Through the years he has worked as technology risk and operational excellence consultant for financial institutions as well as projects manager leading multinational technology infrastructure projects. He has also led multinational operational change projects with lean six sigma to improve financial process. Later, he joined the Institut für Produktionsmesstechnik at TU Braunschweig, Germany and for several years he worked in the development of novel assembling techniques for micro components. He has taught lectures in Discrete Event Simulation, Supply Chain Management, Engineering Economics, Corporate Finances, Financial Engineering, Business Analytics, Data Mining and Machine Learning for engineering students. He is the author of several engineering articles and has participated in multiple conferences worldwide. His research interests include assembling process techniques, manufacturing process simulation, urban traffic and transportation systems simulation, supply chain design and management, machine learning for finances.

Nikhil Pal
Assistant Lean Six Sigma Manager
Jabil
Singapore

Nikhil Pal is a ASQ certified Six Sigma Black Belt Lean coach with over 11 years of experience in Electronics Manufacturing, Medical Devices and Semi-Conductor manufacturing along with Additive Manufacturing. He has mainly focused on driving the Lean Six Sigma culture and Industrial Engineering techniques and tools to drive next level of efficiency in the process. Nikhil has notably improved the labor utilization standards, innovative manufacturing methods, and Value Stream transformation over the past 10 years. Apart from this Nikhil also holds a bachelor's degree in mechanical engineering and MBA degree in Manufacturing Management. Apart from Lean Six sigma he is also driving Industry 4.0 efforts in the current organization where he has introduced a smart glass picking setup using Real ware Augmented Reality Glasses for the warehouse environment in the past. This experiment turned out to save the picking time by sixty percent. And extension of this technology to the Additive Manufacturing process helped to reduce training time by fifty percent. Achievements are not limited to this only, and there are some outstanding ideas he had introduced in the past. Upon implementation, they turned out to be of great benefit. For example, he has designed an automated assembly line for medical devices in the past. These are just a few achievements, but he has noticeably proved himself by coming up with the best innovative solutions when we talk about new ideas. He is currently working as Plant Lean Six Sigma Manager for the Jabil Inc. in Singapore.
Dr. Elizabeth Cudney
Associate Professor of Business Data Analytics
John E. Simon School of Business
Maryville University
St Louis, Missouri, United States

Dr. Elizabeth Cudney is an Associate Professor of Business Analytics in the John E. Simon School of Business at Maryville University. She received her B.S. in Industrial Engineering from North Carolina State University, Master of Engineering in Mechanical Engineering and MBA from the University of Hartford, and doctorate in Engineering Management from the University of Missouri – Rolla. She received the 2020 Walter E. Masing Book Prize from the International Academy for Quality for her book on Lean Six Sigma. In 2018, Dr. Cudney received the ASQ Crosby Medal for her book on Design for Six Sigma. Dr. Cudney received the 2018 IIESE Fellow Award. She also received the 2017 Yoshio Kondo Academic Research Prize from the International Academy for Quality for sustained performance in exceptional published works. In 2014, Dr. Cudney was elected as an ASEM Fellow. In 2013, Dr. Cudney was elected as an ASQ Fellow. In 2010, Dr. Cudney was inducted into the International Academy for Quality. She received the 2008 ASQ A.V. Feigenbaum Medal and the 2006 SME Outstanding Young Manufacturing Engineering Award. She has published nine books and over 95 journal papers. Dr. Cudney is a certified Lean Six Sigma Master Black Belt. She holds eight ASQ certifications, which include ASQ Certified Quality Engineer, Manager of Quality/Operational Excellence, and Certified Six Sigma Black Belt, amongst others.

Felix Veroya, PIE, AAE, MBB, CSM, DHum
Founder & CEO
Ask Lex PH Academy
Batangas, Philippines

Felix has a total of ten (10) years working experience in helping individuals and organizations to build and utilize competencies in Continuous Improvement, Innovation and Analytics across the fields of Academics, Logistics, Supply/Chain, Manufacturing, Training and Consulting for SMEs up to multinational corporations. He has proven skills relating to business administration, people management, research, statistical analysis, workshop facilitation and consulting. He was able to complete and coach projects utilizing proven tools and methodologies such as DMAIC (Six Sigma), SCORE (Lean), Design Thinking (Innovation) and self-initiated improvement frameworks on OEE/Capacity Improvement, Preventive Maintenance Time Reduction, Mistake Proofing, Quick Engineering Solutions, Idea Management, etc. He also published an international book entitled Introduction to Statistical Process Control: A Problem-Solving Process Approach (ISBN: 978-87-403-1849-4) and Best Practices in Managing Virtual Teams under Boookboon Ltd. Under a Denmark based e-book publisher and an Amazon published book entitled Creativity Tools: Develop Creative Solutions to Problems and Opportunities (ISBN: 978-621-8114-38-8). He is a Professional Industrial Engineer, an Associate ASEAN Engineer, a Certified Lean Kaizen Facilitator, a Certified Lean Six Sigma Master Black Belt, a Certified Design Sprint Master and a Chartered Business Advisor. Felix also leads international initiatives to the Philippines as Chairman of the International Association of Innovation Professionals (IAOIP) and National President / Country Manager for Association for Manufacturing Excellence (AME). He has been elected as a Board Director of the Lean (Operational Excellence) Division of the Institute of Industrial & Systems Engineers (IISE). During the Pandemic, he founded an online community for Filipino Industrial Engineers called PINOY IEs to help the community to have a platform to communicate and collaborate things about the profession. With all the initiatives he designed and deployed to the Industrial Engineering community here in the Philippines, he has been conferred with an Honorary Doctoral Degree (Honoris Causa) by the Asian Seminary Leadership and University of Oklahoma. Felix has published studies in Lean Six Sigma and OEE integration and other Lean Six Sigma related content in leading online communities like isixsigma.com. Recently, he won the Asia CEO Awards 2020 Young Leader of the Year and Entrepreneur of the Year Circle of Excellence Awards and this Q1 was awarded Outstanding Edupreneur of the Year by the World Education Leaders Summit and Awards and ASEAN Start Up Award Founder of the Year Finalist for the Philippines. He is now the Founder & CEO of Ask Lex PH Academy, a Philippine based, valued adding training and consulting firm specializing in Continuous Improvement, Innovation, Analytics and Industrial Engineering.

Dr. Jorge Kurita
Professor and Research Director
Universidad Nacional de Asuncion
Paraguay

Dr. Jorge Kurita attended Universidad Nacional de Asuncion in Paraguay, where he got his BS in Electromechanical Engineering. After graduation, he spent some time in academia working as faculty. During this tenure, he taught courses on heat transfer, fluid mechanics, and physics. In 2004 Dr. Kurita was granted the Fulbright scholarship to attend a graduate program on Mechanical Engineering at Michigan Technological University. He has finished his MS and then continued with a doctorate program. NASA and the NSF funded his doctorate research. Dr. Kurita's contribution to his field was well-published in several papers from high-impact journals. From 2011 Dr. Kurita worked as a development engineer II in the competitive automotive industry, Filtran LLC, located in Des Plaines, Illinois. As an experimental researcher, his experience helped Filtran develop special testing techniques never implemented before on filtration systems. In addition, Dr. Kurita worked in the CAE group, contributing to developing simulation techniques to help build state-of-the-art filtration systems. Dr. Kurita participated in developing OEM filters; some of them obtained awards from Jatco and GM. From 2016 Dr. Kurita is back to his alma mater as an assistant professor in Universidad Nacional de Asuncion. Later the same year, he is appointed to lead the research department of the School of Engineering. In 2017 he was appointed to be the Mechanical Engineering Department head at Universidad Nacional de Asuncion. In August of the same year, Dr. Kurita is awarded the "Distinguished Citizen by the City Council of Asunción" for his contributions to education in Paraguay's space sector. And in December of the same year, he was mentioned as "Outstanding Protagonist of 2017" by the newspaper Ultima Hora.
Project Management Panel
5:00 - 6:30 pm (Tuesday), April 6, 2021

Panel Fisher

Dr. Carlos Gualdrón
Project Management Specialist & Professor
Universidad Tecnológica de Bolívar
Colombia

Panel Speaker I

Dr. Darjat Sudrajat, CSCA, CSCM
Head of Business Management Program & Sr. Lecturer
BINUS Business School
Jakarta, Indonesia

Project Logistics Factors: Evidence from Indonesia

Dr. Darjat Sudrajat, CSCA, CSCM is Head of Business Management Program, BINUS Business School Undergraduate Program, Bina Nusantara University (BINUS), Jakarta, Indonesia. His education background comprises Production Management (Bachelor), Business Administration Technology (Master), and Management-Innovation & Entrepreneurship (Doctoral). He has published his research in international journals and proceedings (SCOPUS-Index). His research interests include service management, logistics & supply chain management, and strategic management. He earned international certification in supply chain management (CSCA & CSCM) from ISCEA-USA. Before joining BINUS University as full-time Faculty Member, He once worked for logistics service and manufacturing companies with various managerial positions for 20 years.

Panel Speaker II

Jonas Vieira
Founder at FALA Education
Sorocaba, São Paulo, Brazil

Panel Speaker III

Fábio Caversan
Digital Business and Innovation Vice President
Stefanini US
Southfield, Michigan, United States

Fábio Caversan is a Digital Business and Innovation Vice President of Stefanini US. Fabio has been working with AI since 2003, fundamentally changing the way people interact with systems. He was the co-founder of WOOPI, an innovative cognitive technology company that was later acquired by Stefanini, where he currently serves as Artificial Intelligence Research and Development Director. During his time at WOOPI, he started the creation of Sophie, an omni-channel virtual assistant and AI solution for collaborative digital transformation. Sophie achieves the same results as other AI technologies with five percent of the training required from other tech tools. Fabio also led the vision of implementing Innovation Centers at Stefanini Group based on his desire to co-create solutions with clients. Innovation Centers serve as a technology hub, displaying the many ways that AI, VR, AR and other technologies can be implemented across industries. Earlier in his career, Fabio also served as a Computer Engineering Professor at Sorocaba Engineering School (FACENS) in Brazil for more than 14 years. He earned his masters degree in AI at Escola Politecnica da USP-SP (Sao Paulo University).

Panel Speaker IV
Mr. Miller has an MBA, focused on international business and quality, and a Master of Science in Information Systems, both from Lawrence Technological University (LTU) in Southfield, MI. He is a Lean Six Sigma Master Black Belt certified to the standards and methods of the General Electric Company from the Lasater Institute. As adjunct faculty he taught Quality Control Techniques at LTU’s College of Management, Graduate Business Programs. In addition to the duties of Continuous Improvement Director for the Auraria Higher Education Center, Denver, CO., he currently teaches, as associate faculty, Lean Manufacturing Systems Engineering at the Metropolitan State University of Denver, Advanced Manufacturing Sciences Institute.

Mr. Miller has 30 years of domestic and international business experience in manufacturing operations, quality systems, project management, and process improvement. He has held supporting roles in marketing, sales, information systems, human resources, and facilities management. From consumer electronics, automotive, healthcare, and computer industries, he combines technical and financial literacy with strategic thinking and is known as a thorough Lean Six Sigma practitioner.

Global Engineering Education Panel
7:00 - 8:30 (Tuesday), April 6, 2021

Panel Chair
Ricardo Alexandre Diogo
Professor Adjunto
PUCPR - Pontificia Universidade Católica do Paraná
Curitiba, Paraná, Brazil

Ricardo Alexandre Diogo holds a BSc in Mechatronics Engineering (PUCPR), Master in Industrial & Systems Engineering (PUCPR), and now is a PhD candidate in Knowledge Engineering & Management (UFSC). At PUCPR, Ricardo is conducting a very challenge project for Engineering Education in Brazil with the support of The Fulbright Commission in Brazil, the Brazilian Ministry of Education, through CAPES, Brazilian Federal Agency for Support and Evaluation of Graduate Education, the U.S. Embassy in Brasilia, and the National Council of Education. The project is called Modernization of Undergraduate Education Program (PMG). At PUCPR he was the Mechatronics Engineering head for eight years (2012-2019). Now he teaches in the Polytechnic School for the following undergraduate programs: Mechatronics Engineering, Industrial Engineering and Mechanical Engineering. He teaches some courses in Industry 4.0 Engineering and Management graduate program too. Nowadays, he is the past-president and current director of International Society of Automation – Curitiba Section, Board Member of the Specialized Chamber in Electrical Engineering of the Regional Council of Engineering and Agronomy of Parana, and Leader in the Workforce Workgroup from Brazilian Society for Industrial Internet (ABII). His topics of interest in research are: Engineering Education, Digital Transformation (Industry 4.0), Knowledge Engineering and Knowledge Management.

Panel Speaker I
Dr. Lorena Bearzotti
Professor Auxiliar
Escuela de Transporte
Pontificia Universidad Católica de Valparaíso
Valparaíso, Chile

Panel Speaker II
Keshav Nandurkar, PhD
Professor & Principal
K.K. Wagh Institute of Engineering Education & Research
Nashik, India

Keshav Nandurkar is Professor and Principal of K.K.Wagh Institute of Engineering Education & Research, Nashik, India. He is also Chairman, Board of Studies (Production & Industrial Engineering) at Savitribai Phule Pune University, India. He earned his B.E. in Production Engineering from Walchand Institute of Technology, Solapur, Masters in Production Engineering with specialization in Industrial Engineering and Management from V. J. Technical Institute, Mumbai and Ph.D. in Mechanical Engineering from Indian Institute of Technology Bombay, India. Dr. Keshav started his career as lecturer in Production Engineering at K. K. Wagh College of Engineering Nashik in 1988 and was promoted as Head of Department (2000) and later on as Principal of the institute (2004). He is also member of Board of Directors of K.K. Wagh Education Society which runs several schools and colleges in the state of Maharashtra. He received "Engineering Achievement" award from The Institution of Engineers (India) Nashik Local Chapter, award of "Excellence in Institutional Leadership" during the State Annual Convention of Indian Society for Technical Education (Maharashtra-Goa Section). He also received "Best Principal of the year" award from Computer Society of India, Mumbai Chapter. He has published two book chapters, 32 journal papers and 82 conference papers. His research interests include manufacturing systems modelling, simulation and optimization, facilities planning, Quality Management and IoT based manufacturing. He has successfully advised five doctoral students and ten Masters students. Dr. Keshav has successfully arranged two international conferences in the field of Manufacturing Excellence. He was also Convenor of the National Conference on "Exploring new dimensions in Teaching-Learning for quality education" organized in India. He has delivered over 50 invited talks in various events. Dr. Keshav has visited 8 countries for professional events. He is a member of IE(I), ISTE, ORSI, IIPE, IIIE and CSI.
Dr Esther Matemba
Engineering Education Advisor- Lassonde Educational Innovation Studio (LEIS)
Lassonde School of Engineering, York University, Canada
Governing Board Member for Research in Engineering Education Network (REEN) - Africa representative
Sessional Academic, Curtin University, Western Australia

Esther Matemba is an engineering lecturer and an active engineering education researcher. She is currently working as an Engineering Education Advisor for Lassonde Educational Innovation Studio (LEIS) at York University. Her previous Engineering Education research experience include a Research Assistant role at Curtin University (2015), and a Research Associate role at the University of Western Australia (Feb 2019 – Aug 2019). Esther is a Governing Board Member of Research in Engineering Education Network (REEN) representing Africa region. She has a PhD in Engineering Education from the Department of Civil Engineering at Curtin University, Australia. Her PhD titled ‘Globalisation of engineers: African Professional Engineering Education Perspective’, focused on issues of developing curriculum for globalisation with a particular interest on Africa. Esther also holds a Masters of Science in Construction Management (2009), and a Bachelor of Science in Civil Engineering (2007) from the University of Dar es Salaam, Tanzania, where she also lectured for five years. She is a co-founder of a project called ‘Collaboration and Method Sharing for engineering educators’, founded in 2015, with the purpose of sharing student centred methods to engineering educators in Africa. Esther’s research interests include curriculum for global engineers in the Global South, engineering competencies, international accreditation and African engineering education, and her work appears in different international conferences and journals.

Supply Chain and Logistics Panel
7:00 - 8:30 (Wednesday), April 7, 2021

Panel Chair

Dr. Guilherme Frederico
Associate Professor of Operations and Supply Chain Management
School of Management
Federal University of Paraná – UFPR
Curitiba, Paraná, Brazil

Guilherme Frederico is Associate Professor of Operations and Supply Chain Management at Federal University of Paraná – UFPR. He is also Professor and Researcher at Information Management Department on MSc and PhD programmes. He holds a B.Eng in Civil Engineering (UNESP) - 2003, M.Sc Industrial Engineering (UNESP) - 2008 and Ph.D in Industrial Engineering (UFSCar) - 2012. In 2018 he was a Visiting Research Professor at Centre for Supply Chain Improvement at University of Derby – UK. Currently he is a Research Collaborator Member of this same Research Centre. His research interests and expertise are related to Maturity Management in Supply Chains, Performance Measurement for Supply Chains and Operations Management, Knowledge and Information Management in Supply Chains, Project Management, Procurement and Supply Chain 4.0. He is author of the book “Supply Chain Strategy in the Industry 4.0 Era”. Also, he has published his research outcomes in international refereed journals such as Supply Chain Management: An International Journal, International Journal of Logistics Systems and Management and International Journal of Business Excellence. He has a relevant previous industrial experience having worked for more than 10 years in global companies from different segments on strategic positions of Supply Chain and Operations Management.
**Prof. Dr.-Ing. Carlos Hernandez**
Instituto de Ingenieria Industrial
Universidad Austral de Chile

"Applying Supply Chains Simulation Models for Designing and Improving Blood Bank Distribution Networks"

Dr.-Ing. Carlos Hernández is an industrial engineer and professor in the Institute of Industrial Engineering at Universidad Austral de Chile, Valdivia, Chile. He earned Licentiate Degree in Engineering from Universidad de La Frontera, Temuco, Chile, Master of Sciences in Computational Engineering and Doctor of Engineering from Technische Universität Braunschweig, Brunswick, Germany.

Before joining the academia, he developed an international professional career working for large companies (e.g. PriceWaterhouseCoopers, BHP Billiton, and Merck Sharp & Dohme). Through the years he has worked as technology risk and operational excellence consultant for financial institutions as well as projects manager leading multinational technology infrastructure projects. He has also led multinational operational change projects with lean six sigma to improve financial process.

Later, he joined the Institut für Produktionsmesstechnik at TU Braunschweig, Germany and for several years he worked in the development of novel assembling techniques for micro components. He has taught lectures in Discrete Event Simulation, Supply Chain Management, Engineering Economics, Corporate Finances, Financial Engineering, Business Analytics, Data Mining and Machine Learning for engineering students. He is the author of several engineering articles and has participated in multiple conferences worldwide. His research interests include assembling process techniques, manufacturing process simulation, urban traffic and transportation systems simulation, supply chain design and management, machine learning for finances.

**Panel Speaker II**

**Dr. Simon Peter Nadeem**
Lecture
College of Business, Law and Social Sciences
Centre for Supply Chain Improvement
University of Derby, U.K.

Dr. Simon Peter Nadeem is a Lecturer in the College of Business, Law and Social Sciences, and is associated with the Centre for Supply Chain Improvement at the University of Derby, U.K. Simon has published in high ranking peer-reviewed scientific journals such as the International Journal of Production Research (IJPR), Production Planning and Control (PPC), Resource Conservation and Recycling (RCR), and Business Strategy and the Environment (BSE), to name a few. He has presented and published in International Conferences such as POMS, APMS, INCOM, IEOM and has contributed chapters and case studies in academic books. Simon's research focus and expertise are in the areas of Circular Economy, Lean, Operations Management, Supply Chain Management, Sustainability, and Innovation.

**Panel Speaker III**

**Dr. Ednilson Bernardes**
Professor, Supply Chain Management
Program Coordinator, Global Supply Chain Management
John Chambers College of Business & Economics
West Virginia University (WVU)
Morgantown, West Virginia, USA

Dr. Ednilson Bernardes is a Professor of supply chain management and a program coordinator at West Virginia University (WVU). He founded the Global Supply Chain Management Program at WVU. Before academia, he worked in military transport aviation and the innovative aerospace industry. He holds a Ph.D. degree from the University of Minnesota and a Master's Science degree in Operations, Innovation, and Technology Management. His main research interest includes supply network innovation, competitive dynamics, and digital transformation. His research appears in the top empirical journals publishing studies in his field, including Strategic Management Journal, Decision Sciences Journal, Journal of Supply chain Management, and Journal of Business Logistics, among many others. Besides research, he has co-authored various books, including Digital Supply Networks: Transform your Supply and Gain competitive advantage with Disruptive Technology and Reimagined Processes. He has interacted with and led or facilitated innovation and performance improvement initiatives in large organizations including quality, logistics, and process flow issues. These organizations include Toyota, West Virginia University Hospitals, and the Drug Enforcement Agency (DEA).

**Panel Speaker IV**

**Dr. Paulo Nocera Alves Junior**
Luiz de Queiroz College of Agriculture (ESALQ)
University of São Paulo (USP)
Piracicaba, SP, 13418-900, Brazil

**Panel Speaker V**

**Valeria Mendoza Cortés**
Program Analyst
DHL Global Forwarding
Bogota, D.C., Capital District, Colombia
Dr. Jose Luis Guerrero-Cusumano
Associate Professor of Operations and Information Management
McDonough School of Business
Georgetown University
Washington, D.C., USA

Jose-Luis Guerrero-Cusumano holds a Ph.D. in Industrial and Mechanical Engineering from the University of Illinois and a Master of Sciences in Statistics from the Mathematics Department of the University of Illinois. He is also an Economics Statistician from the School of Economics Science, Rosario University, Argentina. Jose-Luis Guerrero-Cusumano is a Tenured Associate Professor at the Georgetown University School of Business. Prof. Guerrero-Cusumano has been a member of the faculty at Georgetown since 1989 and in the School of Business. He is also the recipient of the Gold Medal for service at Georgetown University. Professor Guerrero-Cusumano was the Academic Director of the Corporate International Master’s at the Georgetown University School of Business (2012-2017). He is former co-Director of the International Institute on Government, Management, and Policy at Georgetown. Guerrero-Cusumano was also the examiner for the American National Research Council in the area of Benchmarking and for Institute of International Program, the “Production and Operations Research Program” and “the Innovation and Organizational Change Program”. Also, Professor Guerrero-Cusumano served as an examiner for the American National Research Council in the area of Benchmarking and for Institute of International Education. Internationally, Professor Guerrero-Cusumano was an examiner for the European Foundation for Quality Management (E.F.Q.M.). He is a member of the Consumer Interest Forum of the American National Standards Institute.

He won the Belgian-American foundation research grant 1995, and spent Spring 1995 as a visiting professor at Institut d’Administration et de Gestion (IAG), Université Catholique de Louvain, Louvain-La-Neuve (Belgium) and at Vesaluis College (Vrije Universiteit), Brussels. In the fall 1997, Professor Guerrero-Cusumano spent his sabbatical year at Ghent University (The Vlerick School of Business), Ghent, Belgium as an invited professor, where he researched European Quality Certifications for Academic Institutions. In spring 2006, he was invited by Escuela Superior de Administración y Dirección de Empresas (ESADE) in Barcelona, where he spent part of his sabbatical. Professor Guerrero-Cusumano has also lectured widely internationally. He is also a researcher at “Laboratoire de Recherche en Management” (University of Versailles, France) in the area of Comprehensive Management, Quality and Innovation. He has lectured at European Quality Master Program system (Versailles University, France; University of Limerick, Ireland; Tor Vergata University, Rome, Italy; University of Piraeus, Athens, Greece; Universidad Complutense, Madrid, Spain), the Master of Total Quality Management (Vaxjo University, Vaxjo, Sweden), the Master of Quality Management (Hebrew University, Jerusalem, Israel), and the Master of Industrial Engineering (Ghent University, Ghent, Belgium) as an invited professor.

Dr. Guerrero-Cusumano was an examiner for the American National Science Foundation in the areas of “Transformations to Quality Organizations Program”, the “Production and Operations Research Program” and “the Innovation and Organizational Change Program”. Also, Professor Guerrero-Cusumano has been a plenary speaker in many conferences around the world and has appeared repeatedly in the media, such as America’s Voice, French TVS, National Public Radio, the international Spanish channel Univision, the Voice of America and CNN international and Jim Lehrer’s News Hour. He speaks seven languages fluently (Dutch, English, French, German, Italian, Portuguese, and Spanish).
Panel Sessions

Panel Speaker I

**Professor Tonya L. Smith-Jackson**
Senior Vice-Provost for Academic Affairs
NC A&T State University
Greensboro, North Carolina, USA

Tonya Smith-Jackson, PhD, CPE is Senior Vice Provost for Academic Affairs at NC A&T State University in Greensboro, NC. Dr. Smith-Jackson earned MS and PhD degrees from NCSU in Psychology/Ergonomics and Interdisciplinary Industrial Engineering. She earned a BA in Psychology from UNC-Chapel Hill. She spent 14 years at Virginia Tech, moving from assistant to associate to full professor of ISE. She is interim director of the Center of Excellence in Research, Education and Outreach and directs the Human Factors Analytics Lab and co-directs the laboratory for Cyber-Human Analytics Research for the Internet of Things (CHARIoT).

Panel Speaker II

**Ms. Aryanne Quintal**
Specialist, Science, Technology and Innovation
Department of Economic Development
Organization of American States – OAS
Washington, DC 20006, USA

Aryanne Quintal is a Specialist within the Competitiveness, Innovation and Technology Section of the Organization of American States (OAS). In her current position, she participates in the formulation, execution and evaluation of multiple regional development initiatives in the areas of technology transfer and commercialization; technology foresight; transformative technologies and the future of work; engineering education; national quality infrastructure and diversity and inclusion in STEM.

She also serves as one of the main contact points for the Governments of the 34 Member Countries of the OAS, as well as coordinator of the two (2) highest hemispheric dialogues on science and technology of the region, namely the Inter-American Meeting of Ministers of Science and Technology and the Inter-American Committee on Science and Technology.

Additionally, Ms. Quintal is a recognized international guest speaker on issues of science, technology and innovation for social and economic development in Latin America and the Caribbean. She is also a guest lecturer for the course "Humanitarian Development" at the School of Engineering and Applied Sciences of Harvard University.

Ms. Quintal speaks French, English and Spanish. She has a Master's Degree in International Relations from the University of Quebec in Montreal (UQAM), Canada, and a Bachelor of Arts with a Major in Political Communication from the same University.

Panel Speaker III

**Prof. Maria Jesus Saenz, PhD**
Executive Director, MIT SCM Blended Master Program
Director, MIT Digital Supply Chain Transformation
Massachusetts Institute of Technology, Center for Transportation & Logistics
Cambridge, Massachusetts, USA

Dr. Maria Jesus Saenz is the Director of the research area on Digital Supply Chain Transformation at the MIT Center for Transportation and Logistics, as Research Scientist. The primary research aims at leveraging the connections among inter-organizational business drivers when facing new collaborative paradigms in digital transformations. Such opportunities require approaches that encompass the challenges of innovation around digitalization, with organizational changes at inter-organizational level, including multidimensional collaboration, digital supply chain capabilities and digital customer value.

Dr. Saenz also serves as the Executive Director of the MIT Supply Chain Management Blended Master Program, an elite MIT degree that allows learners to combine the MITx MicroMasters credential with one+ semester at MIT.

Dr. Saenz teaches various courses at Master, PhD and Executive Education level on Digital Transformation, Supply Chain Management, Collaboration, Risks, Resilience and Project Management. Regarding her education, Dr. Saenz is certified in Participant Centered Learning by Harvard Business School. She received Cum Laude and the Outstanding Doctoral Award for her PhD in Manufacturing and Design Engineering from the University of Zaragoza, where she previously obtained her M.Sc. in Industrial Engineering, while she also studied Mathematics Sciences for several years. In 2003, she received her tenure as Associate Professor in the School of Engineering at the University of Zaragoza. In 2004, she joined the newly-formed research institute MIT Zaragoza Logistics Center as Professor, and she has also served the Center as its Executive Director. She was also the Director of the Spanish Center of Excellence in Logistics. Dr. Saenz has also led various international research projects for the European Commission, as well as for companies on Supply Chain Management innovation, such as P&G, Carrefour, Clariant, Dell, DHL, Leroy Merlin or Caterpillar. She is co-author of more than 80 publications, including books and articles in leading international Journals. Her knowledge transfer work has received 14 awards and her research was cited in the media including MIT Sloan Management Review, Forbes, Financial Times Press or Supply Chain Management Review. She also regularly interacts with business leaders in more than 15 countries.

Panel Speaker IV
**Panel Sessions**

**Dr. Soyica Diggs Colbert**
Interim Dean of Georgetown College & Idol Family Professor
Professor of African American Studies and Performing Arts
Georgetown University
Washington, DC 20057, USA

Soyica Diggs Colbert is the Interim Dean of Georgetown College at Georgetown University, where she is also the Idol Family Professor of African American Studies and Performing Arts.


She has served as a dramaturg for productions at Arena Stage of Lorraine Hansberry's A Raisin in the Sun, August Wilson's Two Trains Running, and Eduardo Machado's Celia and Fidel as well as at Shakespeare Theatre Company of James Baldwin’s Amen Corner. She is the recipient of the Schomburg Scholars-in-Residence Fellowship, Woodrow Wilson Foundation Career Enhancement Fellowship, Stanford Humanities Postdoctoral Fellowship, Mellon Summer Research Grant, and the Robert W. Woodruff Library Fellowship. Her research interests span the 19th-21st centuries, from Harriet Tubman to Beyoncé, and from poetics to performance.

**Panel Speaker V**

**Dr. Sheri Sheppard**
Professor
Department of Mechanical Engineering
Stanford University
Palo Alto, California, USA

Sheri Sheppard teaches both undergraduate and graduate design-related classes, and conducts research on fracture mechanics and applied finite element analysis, and on how people become engineers. From 1999-2008 she served as a Senior Scholar at the Carnegie Foundation for the Advancement of Teaching, leading the Foundation's engineering study. In addition to publishing technical papers, reports, and textbooks, she has led or co-led several large, multi-institutional projects to build new educational research programs and related resources, such as the Center for the Advancement of Engineering Education (CAEE), The National Center for Engineering Pathways to Innovation (Epicenter), and a program on summer research experiences for high school teachers. Her industry experience includes engineering positions at Detroit's "Big Three" — Ford Motor Company, General Motors Corporation, and Chrysler Corporation. She earned her bachelors degree from the University of Wisconsin, and her PhD at the University of Michigan. At Stanford she has served a chair of the faculty senate, as associate vice provost for graduate education, and is the longtime faculty founder of and adviser to the graduate student group MEwomen. Her work has been recognized with numerous honors and awards, including the Walter J. Gores Award, Stanford University's highest award for excellence in teaching and the Chester F. Carlson and Ralph Coats Roe Awards of the American Society for Engineering Education in recognition of distinguished accomplishment in engineering education, and for outstanding teaching and notable contributions to the mechanical engineering profession.

**Panel Speaker VI**

**Dr. Roberta de Castro Souza Pião**
Department of Production Engineering
Polytechnic School
University of São Paulo
Sao Paulo, Brazil

Roberta de Castro Souza Pião holds a degree in Economic Sciences from the Federal University of Mato Grosso do Sul (1995), a master's degree in Production Engineering from the Federal University of São Carlos (1999), a doctorate in Production Engineering from the Polytechnic School of the University of São Paulo (2005) and was visiting researcher at the Institute of Development Studies (IDS) at the University of Sussex, UK. She is currently a PhD professor in the Department of Production Engineering at the Polytechnic School of the University of São Paulo. Member of the Deliberative Council of NAP-CORS / USP (Center for the Study of Organizations). It is dedicated to the areas of "Organizational Economics" and "Strategy, Organization and Operations Management".
### Parallel Sessions

#### Monday, April 5, 2021

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<tr>
<td>8:00</td>
<td>Global Engineering Education</td>
<td>Technology Management</td>
<td>AI</td>
<td>Business Management</td>
<td>Human Factors</td>
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<tr>
<td>9:45</td>
<td><strong>Keynote II</strong> (Welcome Address): Prof. Paulo Roberto Freitas de Carvalho, Director, FACENS University, Sorocaba, Sao Paulo, Brazil – Room 1</td>
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<td>10:00</td>
<td><strong>Keynote III</strong> (Opening Keynote): Daniel Scuzzarelo, Daniel Scuzzarelo, Vice President and Country Manager, Siemens Digital Industry Software South America, São Paulo, Brazil – Room 1</td>
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<td>10:40</td>
<td><strong>Keynote IV</strong>: Ricardo Mourad, Regional Operation Director – South America, Valeo, Sao Paulo, SP, Brazil – Room 1</td>
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<td>11:20</td>
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<td>11:30</td>
<td><strong>Keynote V</strong>: João Luís Frare, MBA, Industrial Engineering Executive Manager, Continental Automotive do Brasil Ltda., SP, Brazil</td>
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<td>12:10</td>
<td><strong>Keynote VI</strong>: Dr. Fernando José Barbín Laurindo, Full Professor and Past Department Head, Production Engineering Department, Polytechnic School, University of São Paulo, Sao Paulo, SP, Brazil – Room 1</td>
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<td>12:50</td>
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<tr>
<td>1:00</td>
<td>Global Engineering Education II</td>
<td>Sustainability</td>
<td>Construction Management</td>
<td>Case Studies</td>
<td>Technical Session</td>
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<tr>
<td>3:00</td>
<td>Global Engineering Education III</td>
<td>Energy</td>
<td>Human Factors &amp; Ergonomics</td>
<td>Sustainability</td>
<td>Simulation Competition</td>
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<tr>
<td>5:00</td>
<td>Panel on Project Management</td>
<td>Sustainability in Supply Chain</td>
<td>Industry 4.0</td>
<td>Manufacturing</td>
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#### Tuesday, April 6, 2021

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<tr>
<td>8:00</td>
<td>Industry Solutions I</td>
<td>Engineering Education</td>
<td>Case Studies</td>
<td>Teaching and Learning</td>
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<tr>
<td>9:45</td>
<td><strong>Keynote VII</strong>: Prof. Eduardo Antonio Modena, Rector/Dean, Federal Institute of Education, Science and Technology, Sao Paulo</td>
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<td>10:00</td>
<td><strong>Keynote VIII</strong>: Cláudio Araujo Rocha, Senior Consultant of D&amp;L Associates, Head of Powertrain Manufacturing LATAM / Powertrain Manufacturing Director (retired), FCA Fiat Chrysler Automobiles LATAM, Brazil – Room 1</td>
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<td>10:40</td>
<td><strong>Keynote IX</strong>: Edinaldo Fancio, Manufacturing, Engineering &amp; Quality Manager, Eaton Corporation, Valinhos, São Paulo, Brazil</td>
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<td>11:30</td>
<td><strong>Keynote X</strong>: Dr. Antonio Henrique de Araujo Junior, Professor, Department of Production Engineering, College of Technology, State University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil – Room 1</td>
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<td>12:10</td>
<td><strong>Keynote XI</strong>: Dr. Antonio Carlos Gomes Junior, Coordenador de Engenharia Mecânica e Centro 4.0 / Assessor Diretoria, Centro Universitário FACENS, Sorocaba, São Paulo, Brazil – Room 1</td>
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<td>1:00</td>
<td>Industry Solutions II</td>
<td>Data Analytics</td>
<td>Engineering Management</td>
<td>Optimization</td>
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<td>3:00</td>
<td>Industry Solutions III</td>
<td>Entrepreneurship</td>
<td>Decision Sciences</td>
<td>Manufacturing</td>
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<td>5:00</td>
<td>Industry Solutions IV</td>
<td>Operations Research</td>
<td>Environmental Engineering</td>
<td>Industry Solutions</td>
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#### Wednesday, April 7, 2021

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<tr>
<td>8:00</td>
<td>Global Engineering Education V</td>
<td>Business Management</td>
<td>Healthcare Systems</td>
<td>Business Management</td>
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<tr>
<td>9:45</td>
<td><strong>Conference co-Chairs Remarks</strong> – Room 1</td>
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<tr>
<td>10:00</td>
<td><strong>Keynote XII</strong>: Dr.-Ing. Enzo Morosini Frazzon, Associate Professor, Industrial and Systems Engineering Department, Federal University of Santa Catarina (UFSC), Florianópolis – SC, Brazil – Room 1</td>
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<td>10:40</td>
<td><strong>Keynote XIII</strong>: Marco Santos, MBA, MBA, Master Black Belt, ZF do Brasil, Sorocaba, São Paulo, Brazil – Room 1</td>
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<td>11:30</td>
<td><strong>Keynote XIV</strong>: Fábio Soares Freccia, Head of Corporate Logistics Planning, Volkswagen do Brasil, São Bernardo do Campo, Sao Paulo, Brazil – Room 1</td>
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<td>12:10</td>
<td><strong>Keynote XV</strong>: Dr. Jose Luis Guerrero-Cusuman, Associate Professor of Operations and Information Management, McDonough School of Business, Georgetown University, Washington, D.C., USA – Room 1</td>
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<td>12:50</td>
<td>Break</td>
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<td>1:00</td>
<td>Global Engineering Education VI</td>
<td>Technical Session</td>
<td>Information Systems</td>
<td>Logistics</td>
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<td>3:00</td>
<td>Industry Solutions V</td>
<td>Global Engineering Edu</td>
<td>Quality Control</td>
<td>AI and IoT</td>
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5:00 – 6:30 pm, **Plenary Panel Session on Supply Chain Management and Logistics** – Room 1

7:00 – 9:00 pm, Thursday, April 8 - **Conference Awards Ceremony** – Room 1

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### 8:00 – 9:45 am, MONDAY
#### Undergraduate Student Paper Competition

**Room 1**

**ID 554** Solution to the Problem of Two-echelon Vehicle Routing with Restricted Time Windows Applying Mathematical Optimization Techniques.  
Marín Triana Sebastián, Meneses Orozco Sergio Andrés and Arias Osorio Javier, School of Industrial and Business Studies, Universidad Industrial de Santander, Bucaramanga, SDR 680002, Colombia

**ID 561** Second South American International Conference on Industrial Engineering and Operations Management  
GÜLCAN BAĞCI, Industrial Engineering Department, Gaziantep University, Gaziantep, 27410, TURKEY  
Gamze Nur Uzun, Industrial Engineering Department, Gaziantep University, Gaziantep, 27410, TURKEY

**ID 727** Solution to the Problem of Two-echelon Vehicle Routing with Restricted Time Windows Applying Mathematical Optimization Techniques  
Marín Triana Sebastián, Meneses Orozco Sergio Andrés and Arias Osorio Javier, School of Industrial and Business Studies, Universidad Industrial de Santander, Bucaramanga, SDR 680002, Colombia

**ID 740** An Underground Model Atmospheric Water Generator Designed for South African Rural Communities  
S. G. Siyaya, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa  
D.V. V. Kallon, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa  
S.K. Thisani, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa

**ID 741** Design of a Hybrid Natural Gas Power Plant Boiler for South African International Airports  
N. Phungula, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa  
D.V. V. Kallon, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa  
P.M. Shandu, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa

#### Room 2

**8:00 – 9:45, MONDAY**  
**Engineering Education**

**Session Chair:** Maximiliano Arroyo Ulloa, Industrial Engineering Department, Santo Toribio of Mogrovejo Catholic University, Chichaylo, Peru

**ID 358** Statistical analysis of female education in income: study case for Brazilian states  
Érica Gonçalves Rezende, Caio Falconí, Isotilia Costa Melo and Daisy Aparecida do Nascimento Rebelatto, Department of Production Engineering, São Carlos Engineering School (EESC)/University of São Paulo (USP), Avenida Trabalhador Sancarlense, São Carlos (SP) - Brazil

**ID 025** The Ciros software study and application  
Joaquim Jose Domingues Lobo, Facens University, Votorantim, Brazil  
Flavio Silva, Industrial Engineering Department, ESEG, São Paulo, Brazil

**ID 047** The poker game to teaching statistics  
Matheus Pedroso and Rodrigo Luiz Gigante, Industrial Engineering Department, Facens University, Sorocaba, Sao Paulo, Brazil

**ID 093** The use of computational simulation, finite element analysis and digital models to improve the practice and teaching of linear structural analysis  
Luiz Pinheiro da Guia, Professor, Departamento de Mecatrônica, Centro Federal de Educação Tecnológica de Minas Gerais, Avenida dos Imigrantes, 1000, Bairro Vargem, Varginha, MG, BRASIL  
Israel Mateus Melo Oliveira, Graduando em Engenharia Civil, Centro Federal de Educação Tecnológica de Minas Gerais, Avenida dos Imigrantes, 1000, Bairro Vargem, Varginha, MG, BRASIL

**ID 092** The use of mobile robotics to pre-mapping areas for Orienteering Competition – “Projeto Azimute Norte Varginha” – Uso de drones  
Luiz Pinheiro da Guia, Professor, Departamento de Mecatrônica, Centro Federal de Educação Tecnológica de Minas Gerais, Avenida dos Imigrantes, 1000, Bairro Vargem, Varginha, MG, BRASIL  
Israel Mateus Melo Oliveira, Graduando em Engenharia Civil, Centro Federal de Educação Tecnológica de Minas Gerais, Avenida dos Imigrantes, 1000, Bairro Vargem, Varginha, MG, BRASIL

**ID 382** Using Active Learning Methodologies in “KAA” Perspective for Teaching Innovation and New Product Development  
Kerlía de Souza Luz, Exact Sciences and Technological Department, UDF University Center, Brasília, DF, Brazil  
Sanderson César Macedo Barbahlo, Production Engineering Department, Faculty of Technology, University of Brasilia, Brasília, DF, Brasil  
Mylène C. Queiroz Farias, Electrical Engineering Department, Faculty of Technology, University of Brasilia, Brasília, DF, Brasil

**ID 744** Appreciative Inquiry to Promote Innovation Culture in Industrial Engineering Students  
Maximiliano Arroyo Ulloa, Industrial Engineering Department, Santo Toribio of Mogrovejo Catholic University, Chichaylo, Peru  
Maira Arroyo Lujan, Management Department, Decorlux-SAC Enterprises, Lima, Peru  
Javier Beltran Reyes, Business Intelligence Department, Comercio-Group, Lima, Peru

**ID 745** Methodological Strategy for the Development of Research Skills in Engineering Students: A Proposal and its Results  
Jesús Zúñiga-Cueva and Elizabeth Vidal-Duarte, Department of Systems Engineer and Informatics, Universidad Nacional de San Agustín, Arequipa-Perú  
Arasay Padrón Alvarez, Reference Center for Advanced Education (CREA), Technological University of Havana (CUJAE), Cuba
### Session Chair: Omar Alonso Patiño C., School of Administration, Finance and Economics, Ean University, Bogotá - Colombia

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<td>Importance of the Control Function in Effective Operational Planning and Rational Decision Making in Mining Organisations</td>
<td>M. M. Manyuchi, Department of Mining Engineering and Surveying, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa; C. Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa; E. Muzenda, Department of Chemical Engineering Technology, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa and Department of Chemical, Materials and Metallurgical Engineering, Faculty of Engineering and Technology, Botswana International University of Science and Technology, P. Bag 16, Palapye, Botswana</td>
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<td>Solving Data and Artificial Intelligence Centric Business Challenges Technologically</td>
<td>Mamomele Malomane and Arnesh Telukdarie, Post Graduate School of Engineering Management, University of Johannesburg, South Africa</td>
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<td>042</td>
<td>The High Schools in Colombia and the Creation of a Convenient Environment for Organizational Change</td>
<td>Omar Alonso Patiño C., Sandra Jennina Sánchez, and Mauricio Díez S., School of Administration, Finance and Economics, Ean University, Bogotá - Colombia; Laura Marcela Patiño-Gutierrez, Faculty of Administrative Sciences, Fundación Universitaria Cafam, Bogotá – Colombia</td>
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<td>The Management of Change and Organizational Culture within The Media Industry in South Africa</td>
<td>Sambil Charles Mukwakungu, Portia Makamu and Junior Mabiza, Department of Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa</td>
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<td>Analysis Impact Of The Associativity On The Competitiveness Of Fishing Commercial Companies.</td>
<td>William E. Mosquera-Laverde, Faculty Administrative and Economic Sciences, Universidad Cooperativa de Colombia, Bogotá D.C, Colombia; Gerardo Avendaño-Prieto, Faculty Administrative and Economic Sciences, Universidad EAN, Bogotá D.C, Colombia; Mario S. Rodriguez-Barrero, Faculty Administrative and Economic Sciences, Universidad Cooperativa de Colombia, Ibagué, Colombia</td>
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<td>Antecedents of Self-control Bias of Investors in the Stock Market of Pakistan (PSX) along with the Scale Development on Self-control Bias</td>
<td>Dr. Muhammad Awais, Assistant Professor (Finance), Foundation University Islamabad, Pakistan; Dr. James Estes, Professor of Finance, California State University, San Bernardino, USA; Dr. Kastrof-Ur-Rehman, Vice Chancellor, City University Peshawar, Pakistan; Dr. Nazima Ellahi, Assistant Professor, Foundation University Islamabad, Pakistan</td>
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<td>The Dynamic Marketing Capability for Service Excellence and Satisfaction of the Brand: Investigation from Customer's Perspective of Hotel Industry</td>
<td>Evo Sampetua Hariandja, Faculty of Economics and Business, University of Pelta Harapan, Tangerang, Banten 15811, Indonesia; Tanggor Sihombing, Faculty of Economics and Business, University of Pelta Harapan, Tangerang, Banten 15811, Indonesia; Liza Handoko, Faculty of Economics and Business, University of Pelta Harapan, Tangerang, Banten 15811, Indonesia</td>
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<td>773</td>
<td>The Influence of Digital Learning Engagement on Indonesian University Students' Online Satisfaction During The COVID-19 Pandemic</td>
<td>Enggal Sriwardiningsih, Nopriadi Saputra, Management Department, Business School-Undergraduate, Bina Nusantara University, Jakarta, Indonesia; Inayatullah, Information Systems Department School of Information Systems, Bina Nusantara University, Jakarta, Indonesia; Nuriani Thoha, International Business Program, Management Department, BINUS Business School International Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia</td>
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### Session Chair: Jussara Pimenta Matos, Department of Electrotechnical, Instituto Federal de São Paulo, São Paulo, SP

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<td>Old Era Bricks vs. New Era Bricks</td>
<td>Syed Ahsan Meboob, Shahid Ali and Saman Shahid, Departments of Civil Engineering &amp; Department of Sciences &amp; Humanities, National University of Computer &amp; Emerging Sciences (NUCES), FAST Lahore Campus, Pakistan</td>
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<td>How Can Problem-based Learning Cooperate to Train Professionals in the Context of Industry 4.0?</td>
<td>Rafaela Soares dos Santos, Anhanguera University Center, Rio de Janeiro, Brazil; Sandro Alberto Vianna Lordelo, Anhanguera University Center, Rio de Janeiro, Brazil; Ryan Welte dos Santos Rodrigues, Anhanguera University Center, Rio de Janeiro, Brazil</td>
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<td>Selection of Appropriate Maintenance Strategy for Oil and Gas Equipment Using Analytical Hierarchy Process (AHP)</td>
<td>Abdelfraser Elwerfall, College of Mechanical Engineering Technology, Benghazi – Libya</td>
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<td>Analysis of Cost and Benefit on Safety Critical Systems</td>
<td>Jussara Pimenta Matos, Department of Electrotechnical, Instituto Federal de São Paulo, São Paulo, SP</td>
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<td>Analysis of scientific initiation in Brazil with emphasis on regional disparities and distribution between public and private institutions</td>
<td>Fábio Aquino da Silva, Geisa Meirelles Drumond, Marcelo Jasmim Meiriño and Mirian Piccinini Méxas,Engineering School of the Federal Fluminense University, Niterói, RJ, Brazil; Haydée Maria Correia da Silveira Batista, Civil Engineering Department, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil</td>
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ID 756  Public Policy and Indonesian Diplomacy for the Acceleration of International Goods Terminal Development
Manal Yunis, Lebanese American University, Ras Beirut, Lebanon

ID 769  Identifying Critical Success Factors in Implementing HVAC Servitization to Encourage Business Model Innovation
Yoratan Suganda and Djoko Sihono Gabriel, Department of Industrial Engineering, University of Indonesia, Jakarta, Indonesia

8:00 – 9:45, MONDAY  e-Business  Room 5
Session Chair: Gidion P. Adirinekso, Universitas Kristen Krida Wacana, Jakarta, Indonesia
ID 598  Towards a Conceptual Framework for Design and Functionality of Websites and Smart Device Apps for Startups in Lebanon: Impact on Customer Journey
Manal Yunis, Lebanese American University, Ras Beirut, Lebanon

ID 702  New Chatbot Application for Small and Medium E-commerce
Mantarana Mantana, Graduate Program/ Master Degree's Program in Logistics Engineering and Supply Chain Management, Faculty of Engineering, Chiang Mai University, Chiang Mai, 50200, Thailand
Uttapol Smutkupt, Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Chiang Mai, 50200, Thailand

ID 721  Expansion of Brick-and-Mortar Retailers to Online Retailing: A Strategic Application of the Technology Acceptance Model in the Philippines
Ma. Francine Isabel G. Caraan, Louis Michael F. Surabia, and Marvin I. Noroña, School of Industrial Engineering and Engineering Management, Mapua University, Marila, Philippines

ID 683  Implementation of Block chain Technology to Maintain Halalness in the Sale of Fresh Beef
Inayatullah, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia

ID 556  Measurement of Brand Image, Price, Promotion, Ease of Use and Satisfaction to Customer Loyalty of on line Transportation in Urban Area
Dimitrius Hikaru & 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 Rajagukuguk, Department of Management Faculty of Economics and Business, Universitas Kristen Indonesia, Jakarta, Indonesia
Gidion P. Adirinekso, Department of Management Faculty of Economics and Business, Universitas Kristen Krida Wacana, Jakarta, Indonesia

ID 557  Global Brand Commitment in International Market: The Factors Affecting Global Brand Commitment
Justin Evanson and 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 558  How Brand Image Mediated Sales Promotion and Price to Impact Shopee Consumer's Decision? The Case of Urban Worker in Jakarta
Gidion P. Adirinekso, Department of Management Faculty Economics and Business, Universitas Kristen Krida Wacana, Jakarta 11470, Indonesia
John Tampil Purba, Department of Management Faculty Economics and Business, Universitas Kristen Krida Wacana, Jakarta 11470, Indonesia

ID 578  Worker Switching Intention from Pay Later Apps to Card: An HCM Approach of Traveloka Customers in Jakarta
Gidion P. Adirinekso, Department of Management Faculty Economics and Business, Universitas Kristen Krida Wacana, Jakarta 11470, Indonesia
John Tampil Purba, Department of Management Faculty Economics and Business, Universitas Pelita Harapan, Tangerang 15811, Indonesia
Sidik Budiono, Department of Management Faculty Economics and Business, Universitas Pelita Harapan, Tangerang 15811, Indonesia
Wilson Rajagukuguk, Department of Management Faculty of Economics and Business, Universitas Kristen Indonesia, Jakarta 13630, Indonesia

8:00 – 9:45, MONDAY  Information Systems  Room 6
Session Chair: Grace Lorraine D. Intal, Information Systems Program Chair, School of Information Technology, Mapua University, Makati City, Philippines
ID 758  Effective Management of Aggregate Technical Commercial and Collection Losses in Abuja Electricity Distribution Company
Muhammad Usman Kaisan and Biloks Ayodele Ismail, Department of Mechanical Engineering, Ahmadu Bello University, Zaria, Kaduna, Nigeria
Najib Aminu Ismail and Md Mizanur Rahman, School of Mechanical Engineering, Universiti Teknologi Malaysia, 81310 Johor Bahru, Johor, Malaysia

ID 776  Vetconnect: E-Commerce Portal for Veterinary Health care Providers and Service Subscriber
Daniele De Guzman; Samuel Mirasol; King Perez; Grace Lorraine Intal, School of Information Technology, Mapua University Makati, Philippines

ID 779  Analysis of Agropolitan Area Planning Based on Natural Disaster Mitigation in West Muna Regency, Southeast Sulawesi, Indonesia
Kalfin, Doctor Program of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Indonesia
Sukono, and Sudradjat Supian, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Indonesia
Mustaфа Mamat, Faculty of Informatics and Computing, Universiti Sultan Zainal Abidin, Kuala Terengganu, Malaysia
Fitri Muljana, Department of Geography, Faculty of Earth Sciences and Technology, Halu Oleo University, Indonesia
Abdul Taibah Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia
April 5, 2021 (Monday) - Session: 10:00 – 11:45 am

10:00 – 11:45, MONDAY  Undergraduate Student Paper Competition  Room 1
Session Chair: Janus Amaru Leonhardt Gutierrez, Pontificia Universidad Católica de Chile, Santiago, Chile

ID 742  Design of a Novel Gas Turbine Generator for South African International Airports
M.A. Mazibuko, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa
D.V.V. Kallon, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa
P.M. Shandu, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa

ID 743  Concept Development for the Design of a Biogas Filling Machine
A.M.C. Khumalo, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa
D.V.V. Kallon, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa
O.J. Kaelo, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa

ID 791  Project on satellite drone
Yograj Gholap, Gsecce.org, Nashik, Maharashtra, India

ID 792  Lean after Sales Service: Implementation of the DMAIC methodology in the after-sales processes of an automotive workshop.
Andrea Michel Chávez Guachamin, University San Francisco de Quito, Quito, Pichincha, Ecuador

ID 791  Collaborative Health Resources Management Model
Janus Amaru Leonhardt Gutierrez, Department of Transport Engineering and Logistics, Pontificia Universidad Católica de Chile, Santiago, Chile
Macarena Paz Navarro Tabilo, Department of Industrial and Systems Engineering, Pontificia Universidad Católica de Chile, Santiago, Chile
Mathias Alberto Klapp Belmar, Department of Industrial and Systems Engineering, Department of Transport Engineering and Logistics, Pontificia Universidad Católica de Chile, Santiago, Chile

10:00 – 11:45, MONDAY  IoT  Room 2
Session Chair: Lalesca Lopes Bego, Production Engineering Department, Centro Universitário FEI, São Paulo, Brazil

ID 071  Industry 4.0: Technologies and Applications
William Soares de Lima, Federal Institute of Science and Technology of São Paulo – Campus Boituva
Marcelo Figueiredo Polido, Federal Institute of Science and Technology of São Paulo – Campus Boituva, Brazil

ID 299  Initial overview of industry 4.0 in textile companies from Santa Catarina
Leila Araújo Falani, Catia Rosana Lange de Aguiar and Ana Julia Dal Forno, Department of Textile Engineering, Federal University of Santa Catarina, Blumenau, Santa Catarina, Brazil

ID 222  Systematic Proposal for Risk Hierarchy in Decision Support for the Implementation of Industry 4.0 Concepts in the Oil and Gas Industry Production Chain
Carlos Eduardo de Lemos Monteiro and Osvaldo Luiz Gonçalves Queihas, Master’s and Doctorate Program in Production Engineering, Engineering School, Universidade Federal Fluminense, Rio de Janeiro, Brazil

ID 121  Process Capability in LGPD Context: Characterization and Potential Future Directions
Gianfranco Muncinelli 1, Edson Pinheiro de Lima 1, 2, Fernando Deschamps 1, 3, Sergio E. Gouvea da Costa 1, 2, Juliana Lara Souza 1, Alexandre dos Santos Pereira, José Marcelo A. P. Cestari 4
1 Industrial and Systems Engineering, Pontificia Universidade Católica do Parana, Curitiba, Brazil
2 Industrial and Systems Engineering, Universidade Federal Tecnológica do Parana, Pato Branco, Brazil
3 DEMEC, Universidade Federal do Parana, Curitiba, Brazil
4 DECIGI/PPGGI, Universidade Federal do Parana, Curitiba, Brazil,

ID 112  Getting Model of MVVM Pattern from UML Profile
El Omari Mouad, Erramdani Mohammed, and Rhouati Abdelkader, University Mohamed First, Oujda, Morocco
ID 391  Bibliometric Analysis to Explore the Strategic Themes and Intellectual Network Structure of Internet of Things
Leonardo Bertolin Furstenau and Michele Kremer Sott, Master student of Graduate Program in Industrial Systems and Processes, University of Santa Cruz do Sul (UNISC), Santa Cruz do Sul – BRAZIL
Yan Pablo Reckziegel Rodrigues, Undergraduate student of Computer Science, University of Santa Cruz do Sul (UNISC), Santa Cruz do Sul, Brazil
Liane Mahimann Kipper, Professor of Graduate Program in Industrial Systems and Processes, University of Santa Cruz do Sul (UNISC), Santa Cruz do Sul – BRAZIL
Michael S. Dohan, Assistant Professor at the Faculty of Business Administration, Director, Center for Innovation and Entrepreneurship Research (CIER), Lakehead University, Thunder Bay - CANADA
José Ricardo López-Robles, Management Engineering PhD, University of the Basque Country, Bilbao - SPAIN
Manuel J. Cobo, Professor at the Dept. of Computer Science and Engineering, University of Cadiz, Cadiz – SPAIN
M Chairul Basrun Umanailo, Department of Agricultural and Forestry, University of Iqra Buru, Namlea, 97571, Indonesia
Risman Iye, Indonesian Literature Faculty, University of Iqra Buru, Namlea, 97571, Indonesia

ID 218  The adoption of Internet of Things for improving Agile Manufacturing practices
Lalesca Lopes Bego and Claudia A de Mattos, Production Engineering Department, Centro Universitário FEI, São Paulo, Brazil

10:00 – 11:45, MONDAY  Case Studies  Room 3
Session Chair: Husham A. All Elbaloula, Sudan University of Science and Technology, Khartoum, Sudan

ID 327  A Comparative Study of Enhanced Crude Oil Degradation in Three Tropical Soils Using Pig and Goat Manures As Organic Amendments
Ojo-Omoniyi, O. A., Department of Microbiology, Lagos State University, Ojo, Lagos, Nigeria
Dike-Ekeh, N., Department of Microbiology, Lagos State University, Ojo, Lagos, Nigeria
Owoeye Oluwatobi Michael, Software Developer, Handsolabs Software Academy

ID 328  A Comparative Study of the Microbiology and Shelf-Life Stability of two Indigenous Palm Wine Products (Elaies Guineensis And Raphia Hookeri) Obtained From Southwest Nigeria
Ojo-Omoniyi, O. A., Department of Microbiology, Lagos State University, Ojo, Lagos, Nigeria
Osho, Roseline R., Department of Microbiology, Lagos State University, Ojo, Lagos-Nigeria
Owoeye Oluwatobi Michael Software Developer, Handsolabs Software Academy

ID 331  An Effectiveness Model of Service Policy of Building Permit (IMB) Based on A Green Spatial Environment in Palembang City
Andries Lionardo, Rudy Kurniawan, Faculty of Social and Political Studies, University of Sriwijaya, Palembang, Indonesia
M Chairul Basrun Umanailo, Department of Agricultural and Forestry, University of Iqra Buru, Namlea, 97571, Indonesia

ID 119  Analysis of the Effects of Millimeter Waves on the Human Body
Felipe de Moraes Serafini, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil

ID 368  Change in Community Work Patterns
Sanggar Kanto, Darsono Wisadipran, and Anif Fatma Chawa, Faculty of Social and Political Sciences, Brawijaya University, East Java, Indonesia
M Chairul Basrun Umanailo, Postgraduate, Department of Sociology, Faculty of Social and Political Sciences, Brawijaya University, East Java, Indonesia

ID 221  Cyclic Steam Stimulation Designing for Two Horizontal Wells in Sudanese Oil Field - Case Study FNE Oil Field
Mahmoud Zohair, Husham A. Ali Elbaloula, and Tagwa A. Musa, College of Petroleum Engineering & Technology, Sudan University of Science and Technology, Khartoum, Sudan

ID 330  Deiksis Persona Language Waetawa Maluku
Ilham Bachtiar, Isal Anwar Hasan, Department of Communication, Institute of Social and Political Sciences Yapis Biak, West Papua, Indonesia
M Rudi, Department of Islamic Education, University of Iqra Buru, Namlea, 97571, Indonesia
Risman Iye, Indonesian Literature Faculty, University of Iqra Buru, Namlea, 97571, Indonesia
M Chairul Basrun Umanailo, Department of Agricultural and Forestry, University of Iqra Buru, Namlea, 97571, Indonesia

10:00 – 11:45, MONDAY  Thesis Competition  Room 4
Session Chair: Dr. Lucila Campos, Department of Production Engineering, Federal University of Santa Catarina (UFSC), Florianópolis, SC, Brazil

DOCTORAL DISSERTATION COMPETITION

ID 720  Framework to manage academic administrative processes, validating it from the students’ perspective. Case study: Faculty of Engineering of a Public University
Santiago Domingo, Moquillaza Henríquez and Javier Elmer Cabrera Díaz, Academic Department of Computer Science- Universidad Nacional Mayor de San Marcos, Av. German Amezaga s/n Lima 1, Lima, Perú
Oscar Abraham Morales Da Costa, Academic Department of Industrial Production and Management-Universidad Nacional Mayor de San Marcos, Av. German Amezaga s/n Lima 1, Lima, Perú
Augusto Ernesto Bernuy Alva, Postgraduate Unit of the Facultad of Systems Engineering and Informatics-Universidad Nacional Mayor de San Marcos, Av. German Amezaga s/n Lima 1, Lima, Perú

ID 290  B2C for Apparel and Home Appliance in Brazil and Canada: A Cost Efficiency Investigation Through A DEA-OCT Model
Isotilia Costa Melo, Department of Production Engineering, Sáo Carlos Engineering School (EESC)/University of São Paulo (USP), Avenida Trabalhador Sancarlense, 400 – 13566-590 – São Carlos (SP) - Brazil
Paulo Nocera Alves Junior, Luiz de Queiroz College of Agriculture (ESALQ)/ University of São Paulo (USP), Av. Pádua Dias, 11 – 13418 -900 Piracicaba (SP) - Brazil
MASTERS THESIS COMPETITION

ID 490  Improving Cycle Time of Returnable Packaging Logistics Management in a Philippine Automotive Manufacturing Plant
Bryan Jay O. Capistrano, Industrial Engineering and Management Department, Polytechnic University of the Philippines
Rhodora N. Buluran, PUP Graduate School, M.H. del Pilar Campus, Sta. Mesa, Manila 1016, Philippines

ID 496  Analytic Study for Subsea Oil Production Optimization Using Lean Concepts
Hamdy Ahmed Abdel Rahiem, Industrial and Engineering Management Department, Faculty of Engineering and Technology, College of Engineering and Technology, Arab Academy for Science Technology and Maritime Transport, Alexandria, Egypt

ID 520  The Mediating Impact of Sustainability on the Relationship between Flexible Manufacturing Systems and Operational Performance
Mohamad Ali Mezher and Raed El-Khalil, Information Technology and Operations Management, Lebanese American University, Beirut, Lebanon

ID 537  Development of Dimensions and Indicators for Quality Measurement of Mobile Banking Services
Billy Arma Pratama, Manik Mahachandra, and Heru Prastawa, Department of Industrial Engineering, Diponegoro University, Semarang, Central Java, Indonesia

10:00 – 11:45, MONDAY  Industry 4.0  Room 5
Session Chair: Prof. Dr. José Lázaro Ferraz, FACENS University, Sorocaba, São Paulo, Brazil

ID 469  Education 4.0: A Case Study Based on the Design and Launch of a High Altitude Balloon Using the STEAM Approach
Gabriel Henrique Fragoso Gonçalves, Monsenhor João Soares School, Sorocaba – Brazil and Federal Institute of Education, Science and Technology of São Paulo - IFSP Sorocaba Campus
Reinaldo Squillante Junior and Sergio Shimura, Mechatronic’s Department, Federal Institute of Education, Science and Technology of São Paulo - IFSP Sorocaba Campus, Sorocaba - Brazil
Cesar Hipólito Pinto and Veronica Trevizoli, MNPEF Physics Department, Federal University of São Carlos - UFSCAR Sorocaba Campus, Sorocaba – Brazil

ID 518  Collision Avoidance Technology: The use of Fourth Industrial Revolution (4IR) for Safe Mining.
Olehile J. Kaelo, Daniel M. Madyira, Department of Mechanical Engineering Science & Technology, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa, 524 Auckland Park, 2006
Wilson R. Nyemba, Department of Quality and Operations Management, University of Johannesburg, Auckland Park Bunting Road Campus, Johannesburg, South Africa and Department of Mechanical Engineering, University of Zimbabwe, P O Box MP 167, Mount Pleasant, Harare, Zimbabwe

ID 521  Additive manufacturing as a tool for Innovation inside Brazilian industries
Mario Carneiro, Materializa Tecnologia, São José dos Campos, Brazil

ID 582  Internet of Things and Artificial Intelligence applied to predictive maintenance in Industry 4.0: A systematic literature review
Vitor Mendes Caldana and Francisco Diego Garrido da Silva, Instituto Federal de Educação, Ciência e Tecnologia de São Paulo, Sorocaba, São Paulo, Brasil
Rafael Araujo de Oliveira and Juliana Freitag Borin, UNICAMP, Campinas, São Paulo, Brasil

ID 583  Analysis of Digital Transformation Process in a Manufacturing Company located in Brazil: A Case Study
Giovanna Dias Zalla, Gustavo Felipe Mendes Corrêa, Paula de Camargo Fiorini, Department of Administration, Federal University of São Carlos (UFSCar), Sorocaba, Brazil

ID 477  Agriculture 4.0 - A sustainable and systemic industry
Ricardo Kenzo Motomatsu, Vice President at Instituto de Engenharia, Advisor to the CONIC - Innovation and Competitiveness Council at FIESP, Member of the Technical Committee for Electric and Hybrid Vehicles at SAE Brazil, São Paulo, SP, Brazil

ID 836  Industry 4.0 Significance and its Applications
MB Kiran, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, India

10:00 – 11:45, MONDAY  Manufacturing  Room 6
Session Chair: Raed El-Khalil, Lebanese American University, Lebanon

Evo Samsoetia Hariandja, Faculty of Economics and Business, University of Pelita Harapan, Tangerang, Banten 15811, Indonesia
Jessica Laura, Faculty of Economics and Business, University of Pelita Harapan, Tangerang, Banten 15811, Indonesia

ID 798  Supervisor Controller-Based Elementary Siphons and Colored Petri Net for Deadlock Control and Machine Failures in Automated Manufacturing Systems
Husam Kaid1, Abdulrahman Al-Ahmari1, Emad Abouel Nasr1,2, Adel Al-Shayea1, Ali K. Kamrani3, and Haitham A. Mahmoud1,2
1Industrial Engineering Department, College of Engineering, King Saud University, Riyadh 11421, Saudi Arabia
2Mechanical Engineering Department, Faculty of Engineering, Helwan University, Cairo 11732, Egypt
3Industrial Engineering Department, College of Engineering, University of Houston, Houston, TX 77204 4008, USA
April 5, 2021 (Monday) - Session: 12:00 – 1:45 pm

Room 1

12:00 – 1:45, MONDAY  Graduate Student Paper Competition  Room 1

Session Chair: Professor Don Reimer, LTU, MI, USA

ID 542  Literature Review and Bibliometry: a Groundwork on Servitization
Gustavo Canaver Pedrinho and Paulo A. Cauchick-Miguel, Graduate Program of Production Engineering, Universidade Federal de Santa Catarina, Florianópolis, SC 88040-900, Brazil

ID 548  IIoT Architecture Using LoRa Technology, LoRaWAN and OPC UA Protocols
Angelo Gumaraes Silva, Federal University of Minas Gerais, 6627 Ave. Antônio Carlos, Belo Horizonte, MG 31270–901, Brazil
Hugo César Coelho Michel, Electronic Engineering Department, Federal University of Minas Gerais, Antônio Carlos, Belo Horizonte, MG, Brazil

ID 590  Warehouse Performance Measurement with Highly Seasonal Demand and Products with a Long and Short Life Cycle Simultaneously Applying System Dynamics
Diego Ramirez-Malule, Juan Sebastián Jaén-Posada and Juan Guillermo Villegas-Ramirez, Grupo de Investigación ALIADO, Universidad de Antioquia UdeA, Calle 70 No. 52-21, Medellín, Colombia

ID 522  Process Reliability Improvement of Slitting Machines in an Industrial Setting
Dolor Roy Enarevba, Modestus O. Okwu, Lagouge K. Tartibu, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa
Chukwuebuka M. U-Dominic, Department of Industrial and Production Engineering, Nnamdi Azikiwe University, Awka, Nigeria.
Ifeinyina J. Orji, Research Center for Smarter Supply Chain, Dongwu Business School, Soochow University, No. 50 Donghuan Road, Suzhou, Jiangsu 215006, People’s Republic of China

Room 2

12:00 – 1:45, MONDAY  Lean Six Sigma  Room 2

Session Chair: Luis Fernando Pedraza Ruiz, Fundación Universitaria de Popayán, Brazil

ID 306  Exploring the applications of lean manufacturing practices in pharmaceutical industry
Muhammad Ali Khan, Department of Industrial Engineering and Management, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan

ID 257  Optimization in MIG Welding by Using Six Sigma Tools
Muhammad Mudassar Sharif, Department of Industrial Engineering, Tsinghua University, Haidian District, Beijing, 100084, P.R. China
Zahid Anwar, Department of Industrial Engineering, Tsinghua University, Haidian District, Beijing, 100084, P.R. China
Yousaf Ayub, Quality Management System, Main Boulevard Lahore, 54000, Pakistan
Amar Abbas, Institute of Quality and Technology Management, University of the Punjab, Lahore, 54000, Pakistan
Munir Ahmed, Institute of Quality and Technology Management, University of the Punjab, Lahore, 54000, Pakistan

ID 367  Proposal for the Optimization of the Manufacturing Process of Integral Kitchens of the Casa Madeira Company across to Lean Six Sigma Methodology
Laura Cristina Carvajal Benitez, Ingenieria Industrial, Fundacion Universitaria de Popayan, Popayán – Cauca – Colombia
Luis Fernando Pedraza Ruiz, Ingeniero Industrial y Magister en Diseño y Dirección de Proyectos Tecnológicos, Fundación Universitaria de Popayán, Popayán – Cauca – Colombia
Alexandra Bustamante Pizo, Ingeniera Industrial, Fundación Universitaria de Popayán, Popayán – Cauca – Colombia
Daniela Sandoval Arístizabal, Ingeniero Industrial, Fundación Universitaria de Popayán, Popayán – Cauca – Colombia

ID 024  Assessment of Transportation Management System Implementation
Goreth C. Gonçalves, Claudemir L. Tramarico, and Fernando A. S. Marins, Sao Paulo State University (UNESP), Engineering School, Campus Guaratinguetá, Guaratinguetá, SP, 12516-410, Brazil

ID 026  Application of Weibull Statistics in the Failure Analysis Sector of an Automotive Parts Manufacturer
Letícia Stefani de Abreu Lima, Industrial Engineering Department Facens University, Sorocaba, Brazil
Flávio Silva, Industrial Engineering Department, ESEG, São Paulo, Brazil

ID 117  Using e-status for assist learning in a Probability and Statistics subject
12:00 – 1:45, MONDAY  
**Project Management  Room 4**

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<tr>
<th>ID</th>
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<th>Speaker(s)</th>
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<tr>
<td>116</td>
<td>Response profiles in the ROSE2 survey</td>
<td>Diego Petrucci, Universidade Nacional de Hurlingham, Instituto de Educación, Av. Vergara 2222, B1688GEZ Villa Tesei, Buenos Aires, Argentina. Departamento de Ciencias Básicas, Facultad de Ingeniería, Universidad Nacional de La Plata, 1 y 47, CP 1900, La Plata, Buenos Aires, Argentina</td>
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<tr>
<td>105</td>
<td>Cylinder Management Flexibilization for Rotogravure Process- Transition for Industry 4.0</td>
<td>Leonardo Moraes Aguiar Lima dos Santos, Matheus Becker da Costa, Ronaldo Bastos dos Santos; Ricardo Silva de Souza; Sandra Elisia Lemoes Iepsen and Liane Mahlmann Kipper; Postgraduate Program in Industrial Systems and Processes, University of Santa Cruz do Sul, Santa Cruz do Sul, Rio Grande do Sul, Brazil</td>
</tr>
<tr>
<td>106</td>
<td>Scientific Mapping of Project Management and Educational Perspectives for Industry 4.0</td>
<td>Dantom Guilherme Helfer, Sandra Elisia Lemões Iepsen and Liane Mahlmann Kipper, Graduate Department in Industrial Systems and Processes, University of Santa Cruz do Sul, Santa Cruz do Sul, Rio Grande do Sul, Brazil</td>
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<td>069</td>
<td>Engineering project driver: fostering innovation and core values in technology education</td>
<td>Gabriel Vitor S. Gouvêa, Mechanic Technical/Professional Education Department student, CEFET/RJ, Rio de Janeiro, Brazil</td>
</tr>
</tbody>
</table>
12:00 – 1:45, MONDAY  Entrepreneurship and Innovation  Room 5
Session Chair: Milton Soto-Ferrari, Department of Marketing and Operations, Indiana State University, Terre Haute IN 47807, USA

ID 497  Innovation ecosystem at RFEPCT and student leadership at Cefet/RJ
Nayne da Silva Moura, Business Administration Department, CEFET/RJ, Rio de Janeiro, Brazil
Priscila Daniel de Paiva Gama e Silva,DIGES - Strategic Management Directory, CEFET/RJ, Rio de Janeiro, Brazil
Francisco Casarim Rapchan, Computer Science Department, IFES, Espírito Santo, Brazil
Úrsula Maruyama, Business Administration professor, CEFET/RJ, Brazilian Ministry of Education, Setec/MEC, Brasilia-DF, Brazil

ID 508  Product development and Business Creation opportunity during the Pandemic: A Case study of Le Misure – Indonesia Italian Fusion Food
Alvin, 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
Rudy Aryanto, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

ID 509  The Value Innovation Capabilities to Create Powerful Business Strategy: A Case Study on The High Business Performance of An Investment Business in Covid 19 Pandemic
Jibril Muhammad Irvan, 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

ID 510  Frozen Food Packaging And Innovation Product Design Addressing Customers Pains Point In Covid 19 Quarantine: A Case Study of Homemade Frozen Food
Muhammad Farhan Arvianto, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia
Nada Piedita, 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

ID 511  Digital Branding and Online Marketing Communication Strategy Optimization: A Case Study of a Small Hits Beverage Business
Agathacia Melinda, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia
Andreas Chang, 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

ID 516  The Implementation of Mixture Design and Design Thinking for the Development of a Bolivian Native Plants Based Liquor
Boris Christian Herbas Tontco and René Cabero Villazón, Exact Sciences and Engineering Research Center (CICEI), Bolivian Catholic University, Cochabamba, Bolivia

ID 704  Traditional Food Business Surviving Strategy during the Covid-19 Pandemic in Indonesia: A Case Study of a Small Traditional food business-Pempek Miniampera
Kiky Chandra Megawan, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia
Ronny Samsul Bahri, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia
Emra Lubis, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

ID 722  Entrepreneurial Intention in Surgical Instrumentation Students: Study in Colombian Universities
Norka Elena Marquez-Blanco, Department of Health Sciences, Universidad Libre, Barranquilla, Colombia
Lorena Herrera-Fuentes, Department of Extension and Social Projection, Corporación Universitaria Latinoamericana, Barranquilla, Colombia
Odette Chams-Anturi, Department of Economic Science, Universidad de la Costa, Barranquilla, Colombia
Milton Soto-Ferrari, Department of Marketing and Operations, Indiana State University, Terre Haute IN 47807, USA
ID 825  Increase in Corn Farming Income and Competitiveness in the Allocation of Workers in North Sulawesi
Jefny Bernedi Markus Rawung, Jantje Gustaf Kindangen, Supratman Sirih, The AIAT of North Sulawesi, Manado, Indonesia
Abdul Talib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia

ID 826  Determination of the Status of Utilization and Effort of Mackerel Scad (Decapterus Spp) Caught in the Manado Waters North Sulawesi
John Socrates Kekunusa, Marline Sofianna Paendong, Department of Mathematics, Universitas Sam Ratulangi Manado, Sulawesi Utara, Indonesia
Sendy Beatrix Rondonuwu, Department of Biology, Universitas Sam Ratulangi Manado, Sulawesi Utara, Indonesia
Abdul Talib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia

ID 827  Dynamical Behavior of an HIV/AIDS Epidemic Model with Saturated Incidence Rate and Treatment
Marsudi, Bambang Sugandi, Darmajid, Department of Mathematics, Faculty of Mathematics and Sciences, University of Brawijaya, Malang, Indonesia
Abdul Talib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia

ID 828  Freeze-Dried Homologous Platelet Rich Plasma Induces Osteoblast Proliferation
Niken Olivia, Wiwin-winda Kusumadewi, Nandini Sumito, Clinical Dentistry Program, Department of Periodontology, Faculty of Dentistry, Universiti Gadjah Mada, Sleman, Yogyakarta, Indonesia
Kwartarini Murtiastuti, Department of Periodontology, Faculty of Dentistry, Universitas Gadjah Mada, Sleman, Yogyakarta, Indonesia
Abdul Talib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia

ID 829  Identification of T – Pier Construction Work Activities on the Elevated Railway Project to Develop Work Breakdown Structure
Pungky Dharma Saputra, Nina Purwanti, Muhammad Hamzah Fursuri, Anasya Arista Laksmi, Military Building Construction Engineering Study Program, Faculty of Military Engineering, Indonesia Defense University, Bogor, Indonesia
Luxpetrus Agustian Suhandi, Civil Engineering Study Program, School of Engineering & Technology, Tanri Abeng University, Jakarta, Indonesia
Abdul Talib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia

ID 830  Identification of High Safety Risks in Box Girder Bridge Construction to Develop A Safety Plan for Elevated Railway Projects
Abdul Talib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia

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April 5, 2021 (Monday) - Session: 2:00 – 3:45 pm

2:00 – 3:45, MONDAY  Supply Chain and LSS Competition  Room 1

SUPPLY CHAIN AND LOGISTICS COMPETITION

ID 103  Supply Chain Differentiation: A Quantitative Fuzzy Application to Segment Demand Driven Supply Chains
Lucas Alves S. Santos and Kleber Francisco Espósito, Department of Production Engineering, São Carlos School of Engineering, University of São Paulo, São Carlos, Brazil

ID 324  Diagnosis And Characterization of the Supply Chain of a Perishable Product by Using a Reference Model: A Study Case
Manuel J. Campuzano, Faculty of Engineering, Industrial Engineering Program, Universidad del Magdalena, Santa Marta, Colombia
Verónica Deibe Blanco, School of Basic Sciences, Technologies and Engineering, Universidad Nacional Abierta y a Distancia, Bogotá D.C., Colombia

ID 777  Traceability Architecture Technology for Short Commercial Exchange
John Jairo Aguilera Camacho, Research Group EGE, Early Career Researcher at Grizzly, Fundación Universitaria Compensar, Bogotá D.C., Colombia
Angela Maritza Mora Gómez, Research Group EGE, Early Career Researcher at Grizzly, Fundación Universitaria Compensar, Bogotá D.C., Colombia
Lina Nataly Alvarado Riaño, Research Group EGE, Early Career Researcher at Grizzly, Fundación Universitaria Compensar, Bogotá D.C., Colombia

LEAN SIX SIGMA COMPETITION

ID 681  Systematic Literature Review of the application of Lean methodologies in the retail sector
Carlos Chirinos Cuadros, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Peru
Luis Bedoya Jimenez, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Peru
María Teresa Noriega Aranibar, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Peru

COVID-19 ANALYTICS COMPETITION

ID 774  BTQ Teaching Based on 'Vlog Teachers' on Youtube Channel During Pandemic Era: Theory and Practice of Online Teaching
Nurul Jadid University, Probolinggo, East Java, Indonesia
Abdul Talib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia
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<td>Review of the Impact of Six Sigma as a process improvement in product and service-based manufacturing systems in the era of Fourth Industrial Revolution (4IR)</td>
<td>M.O. Okwu 1,2, D.R. Enarevba 1,2, L.K. Tartibú 1, and U. Dominic 3, 1 Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa, 2 Department of Mechanical Engineering, Federal University of Petroleum Resources Effurun, Delta State, Nigeria, 3 Department of Industrial and Production Engineering, Nnamdi Azikiwe University, Awka, Nigeria</td>
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<td>524</td>
<td>Systematic Literature Review of Six Sigma Philosophy in Manufacturing Operations</td>
<td>Chukwuebuka M. U-Dominic, Department of Industrial and Production Engineering, Nnamdi Azikiwe University, Awka, Nigeria, Modestus Okwu, L.K. Tartibú and Dolor Roy Enarevba, Department of Mechanical Engineering, University of Johannesburg, South Africa.</td>
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<td>525</td>
<td>Improving the quality and operations of a cable manufacturing company by implementing Six Sigma-DMAIC Technique</td>
<td>Chukwuebuka M. U-Dominic, Department of Industrial and Production Engineering, Nnamdi Azikiwe University, Awka, Nigeria, Modestus O. Okwu and Lagoaugé K. Tartibú, Dolor Roy Enarevba, Department of Mechanical Engineering and Industrial Engineering, University of Johannesburg, South Africa.</td>
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<td>504</td>
<td>Construction of a Parkinson’s voice database</td>
<td>Monica Giuliani, Silvia Noemi Perez, Evangelina Maldonado, Pablo Bondar, Daniela Linari, National University of La Matanza, Buenos Aires, Argentina, Dario Adamec, Hospital Posadas- Hospital Rivadavia, Argentina, María Inés Debas, Carlos Morales, Leticia de León, Aldo Yaco, Joice Birelli, Macarena Martínez Ribaya, María Lis Lacaze, Hospital Rivadavia, Servicio de ORL y Fonoaudiología, Ciudad de Buenos Aires, Argentina, Jorge A. Gurlekian, Laboratorio de Investigaciones Sensoriales-INGEM-CONICET-UBA, Ciudad de Buenos Aires, Argentina</td>
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<td>Review of the Impact of Six Sigma as a process improvement in product and service-based manufacturing systems in the era of Fourth Industrial Revolution (4IR)</td>
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### 2:00 – 3:45, MONDAY

**IME**  
Session Chair: Débora Teixeira Vilarinhos, Department of Production Engineering, University of Brasilia, Brasilia, CEP 70910-900, Brazil

**Room 4**

**ID 084**  
Review for Identification of free software for data mining  
Edgar Alirio Restrepo Castillo, Magister in Informática de la Universidad Santiago de Cali. Ingeniero de Sistemas de Universidad Antonio Nariño. Docente investigador de la Universidad Santiago de Cali, Facultad de Ingeniería

**ID 046**  
ICT as Part of the Training Process in Professional Practice  
Camilo Peña Lapeira and Liliana Vargas Puentes, Unidad de Ciencias Administrativas e Ingeniería, Corporación Universitaria Minuto de Dios Bogotá, Cll 1 # 9-50, Colombia

**ID 753**  
The Impact of User Experience on Adopting Mobile Banking Applications and Moderating Age.  
Débora Teixeira Vilarinhos and Ari Mariano-Melo, Department of Production Engineering, University of Brasilia, Brasilia, CEP 70910-900, Brazil  
Patricio Ramírez-Correa, School of Engineering, Catholic University of the North, Coquimbo, 1781421, Chile  
Maira Rocha Santos and Marília Miranda Forte Gomes, CEAM - Center for Advanced Multidisciplinary Studies, University of Brasilia, Brasilia, CEP 70910-900, Brazil

**ID 831**  
Non-Autonomous Simple Chaotic Generator: Computer Modelling, Analysis and Circuit Realization  
Volodymyr Rusyn, Department of Radio Engineering and Information Security, Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine  
R. Apip Miptahudin, Department of Military Electrical Engineering, Universitas Pertahanan, Indonesia  
Muhamad Deni Johangsyah, Department of Mathematics, Universitas Padjadjaran, Indonesia  
Diana Purwandari, Faculty of Engineering, Universitas Muhammadiyah Tasikmalaya, Indonesia  
Abdul Taib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia

### 4:00 – 5:45, MONDAY

**OM**  
Session Chair: Flavio Silva, Industrial Engineering Department, ESEG, São Paulo, Brazil

**Room 5**

**ID 067**  
Generation of Voltage by means of Microbial Fuel Cells using the bacteria Antinomiceto, Bacillus sp and Escherichia coli  
Rojas Flores, Segundo Grupo de Investigación en Ciencias Aplicadas y Nuevas Tecnologías, Universidad Privada del Norte, Trujillo 13007, Perú  
Rodríguez Yupanqui- Magda, De La Cruz Noriega- Magaly, Agüero Quiñones- Rickelmi, Enríquez León- Martin, Contreras Cáceda-Cynthia

**ID 814**  
An Assessment of Failure Modes and Criticality Analysis in a Pharmaceutical Industry by RPN Method  
Nourin Mohsin and Rafat Mahmud Hridoy, Department of Industrial Engineering and Management (IEM), Khulna University of Engineering & Technology Bangladesh

**ID 815**  
Artificial intelligence: Emotional and cognitive evaluation focused on the analysis of consumer trends and behaviors. Mass consumer product cases  
Camila Alejandra Reveo Rodríguez, Whitman Joel Marín Salazar and Jordy Vínculo Urquizo Solorzano, Colegio de Ciencias e Ingeniería, Universidad San Francisco De Quito, USFQ Ecuador

**ID 816**  
Review of Pension Systems in Institutions of Higher Learning: Key Lessons for Zambia  
Romeo Yohane, Bupe G Mwanza and Tawonaziso Chowa, Graduate School of Business, University of Zambia, G.E.R Campus, Lusaka, Zambia

**ID 813**  
Performance Analysis of a Tri-adjustable Automated Heavy-Duty Handling System Designed on Industry 4.0 Principles  
S.Z. Mafokwane and D.V.V. Kallon, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa

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### April 5, 2021 (Monday) - Session: 4:00 – 4:45 pm

**High School STEM Competition**  
Session Chair: José Marcelo Almeida Prado Cestari, Federal University of Paraná (UFPR), Curitiba, Brazil

**Room 1**

**ID 443**  
An interdisciplinary approach for the teaching of basic electricity through panels construction  
Raphaela Beatriz Barison Secco, Administration technician student integrated to high school, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Campus Sorocaba, São Paulo, Sorocaba, Brazil  
Diego R. N. Correa, Professor, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Campus Sorocaba, São Paulo, Brazil

**ID 444**  
Modern Practices in the Teaching of Modern and Contemporary Physics as an Initiation Tool for High School Students in the Scientific Career  
Maria Luíza Silva Dell Anhol, Administration technician student integrated to high school, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Campus Sorocaba, São Paulo, Brazil
ID 445  Study of the surface chemical composition of PEO-treated metallic biomaterials by X-ray photoelectron spectroscopy
Beatriz Isquierdo Pires, Administration technician student integrated to high school, PIBIFSP Scholarship, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Campus Sorocaba, SP, Brazil
Diego R. N. Correa, Professor, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Campus Sorocaba, São Paulo, Sorocaba, SP, Brazil

ID 470  High Altitude Cosmic Radiation Measurement Using Stratospheric Balloon in Sorocaba Region – A STEM Experiment for High School Students
Tiago Ruivo Coelho, Electronics Department, Federal Institute of Education. Science and Technology of Sao Paulo - IFSP Sorocaba Campus, Sorocaba, Brazil
Sergio Shimura, Electronics Department, Federal Institute of Education. Science and Technology of Sao Paulo - IFSP Sorocaba Campus, Sorocaba, Brazil

ID 589  Portfolio Management of Social Projects: A case study in IFSP
Anne Karolyne de Almeida Lima and Vitor Mendes Caldana, Instituto Federal de Educação, Ciência e Tecnologia de São Paulo, Sorocaba, São Paulo, Brazil

ID 770  Development of Integrated Security Control Service Model Using Artificial Intelligence
Jung Sein, PAUL MATH SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea, (Supervised by teacher Shin Dong Ho)

ID 771  Impact on Chinese Online Shopping Mall Buyer Purchase Loyalty Using Artificial Intelligence Recommendation Service
Do Won Kim, PAUL MATH SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea, (Supervised by teacher Shin Dong Ho)

ID 772  Deep Learning Data Visualization Using Architectural Data
Ji Mok Lee, PAUL MATH SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea, (Supervised by teacher Shin Dong Ho)

4:00 – 5:45, MONDAY  Women in Industry and Academia Panel Room 2
Panel Chair:
Dr. Isotilia Costa Melo
Department of Production Engineering
São Carlos Engineering School (EESC)
University of São Paulo (USP)
São Carlos (SP) - Brazil

Panel Speaker I
Jannatun Naher, Ph.D.
Adjunct Assistant Professor
North Carolina Agricultural and Technical State University
Greensboro, North Carolina, United States

Panel Speaker II
Dr. Noha Mostafa
Assistant Professor in Industrial Engineering
The British University in Egypt
El Sherouk, Cairo, Egypt

Panel Speaker III
Karla Gonzalez
Quality Engineer
Greene Tweed
Houston, Texas, USA

Panel Speaker IV
Ligia Maimone da Cunha
Senior Operations Manager - Strategic Partnership
Flex
Sao Paulo, Brazil

4:00 – 5:45, MONDAY  Modeling and Simulation Room 3
Session Chair: Milton M. Herrera, Economic Science Research Centre, Universidad Militar Nueva Granada, Bogotá, Colombia
ID 213  CSIR Becoming Solar Energy Autonomous
Mudau Unarine Bridget, Council for Scientific and Industrial Research (CSIR), South Africa, Pretoria
Pratt Lawrence, Council for Scientific and Industrial Research (CSIR), South Africa, Pretoria

ID 298  Exploring the Evolution Structure of Process Modelling for Industry 4.0: a Science Mapping for Proposing Research Paths
Michele Kremer Sott 1, Leonardo Bertolini Furstenau 1, Yan Pablo Reckziegel Rodrigues 2 and Liane Mahlmann Kipper 3
1 Master student of Graduate Program in Industrial Systems and Processes, University of Santa Cruz do Sul (UNISC), Santa Cruz do Sul – BRAZIL
2 Undergraduate student of Computer Science, University of Santa Cruz do Sul (UNISC), Santa Cruz do Sul – BRAZIL
3 Professor of Graduate Program in Industrial Systems and Processes, University of Santa Cruz do Sul (UNISC), Santa Cruz do Sul – BRAZIL

ID 035  Planning Support Tool for Torobayo Beer Production using Systems Dynamics
Vicente Ramírez, Oscar Jara, Institute of Industrial Engineering and Systems, Universidad Austral de Chile, Valdivia, Chile

ID 009  Simulation Improves Service and Resource Allocation at an Automotive Garage
Wenqi Deng, Yang Yang, Di Zhao, and Edward J Williams, Business Analytics, College of Business, University of Michigan – Dearborn, MI, USA

ID 373  The use of simulation in analysis of femoral prostheses fatigue
Rodrigo Cesar dos Santos, Wilson Carlos da Silva Junior, Givanildo Alves dos Santos and Edson Bispo Ferreira, Mechanic Department, Sao Paulo Federal Institute, Sao Paulo, Brazil

4:00 – 5:45, MONDAY  Supply Chain  Room 4
Session Chair: Claudemir L. Tramarico, Sao Paulo State University (UNESP), Engineering School, Campus Guaratinguetá, Guaratinguetá, SP, 12516-410, Brazil

ID 156  A Crowdsourced Approach for Supply Chain Network Optimization Using Hub and Spoke Model
Dr. Ferdous Sarwar, Associate Professor, Department of Industrial & Production Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Azim Sarwar, Israt Humayra and Navid Anas Sadman, Department of Industrial & Production Engineering, Military Institute of Science and Technology (MIST), Mirpur Cantonment, Dhaka 1216, Bangladesh

ID 094  An Model for Performance Measurement of Green Supply Chain
Luiz Eduardo Simão, Programa de Mestrado Profissional em Administração (MPGIL), Universidade do Vale do Itajai, Itajaí, SC, 88302-901, Brazil
Ricardo Villarroel Dávalos, Programa de Pós Graduação em Engenharia de Produção (PPGEP), Universidade Federal de Santa Catarina (UFSC), Florianópolis, SC, 88040-900, Brazil
Carlos Manoel Taboada Rodríguez, Programa de Pós Graduação em Engenharia de Produção (PPGEP), Universidade Federal de Santa Catarina (UFSC), Florianópolis, SC, 88040-900, Brazil

ID 342  Diseño de la cadena de suministro mediante modelación entera mixta para la producción-distribución de alimentos concentrados para peces
Luciana Molina Quijano y José Luis Hoyos Concha, Facultad de Ciencias Agrarias – Programa Ingeniería Agroindustrial, Universidad del Cauca,Popayán, Colombia
Nicolás Clavijo Buritica, Departamento de ingeniería civil e industrial, Pontificia Universidad Javeriana Cali, Valle del Cauca, Colombia

ID 340  Estructuración de la red de suministro mediante sistema de información geográfica (SIG) de la producción serícola del Cauca
Luciana Molina Quijano y Daniel Alejandro Rosero Erazo, Facultad de Ingeniería – Programa Ingeniería Industrial, Fundación Universitaria de Popayán, Popayán, Colombia

ID 325  Risk management in producers of hass avocado within a Colombian fruit and vegetable supply chain
Vivian Lorena Chud Pantoja, Industrial Engineering, University of Valle, Zarzal, Valle del Cauca, Colombia
Claudia Cecilia Peña-Montoya, Operations and Systems Department, Engineering Faculty, Universidad de Antioquia, Medellín, Colombia

ID 039  Sustainability Reports and Supply Chain Management in Agroindustry: A Review of the Scientific Literature
Diego Alonso García Bonilla and Edgar Guillermo Rodríguez Guevara, Department of Administration and Organizations, Faculty of Administration Sciences Universidad del Valle, Cll. 4B 36-00, Cali, Colombia

ID 136  Systematic Mapping Analysis on Sustainable Supply Chain Management
Claudemir L. Tramarico, Sao Paulo State University (UNESP), Engineering School, Campus Guaratinguetá, Guaratinguetá, SP, 12516-410, Brazil

4:00 – 5:45, MONDAY  Transportation  Room 5
Session Chair: Carlos Hernández, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile

ID 540  Confirmatory Factor Analysis of Comprehensive Traffic State Assessment (CTSA): A Case Study Approach towards an Integrated LGU Transportation Planning and Traffic Management Model
Redrax Stephen A. Santos and Marvin I. Norofia, School of Industrial Engineering and Engineering Management, Mapua University, Manila, Philippines

ID 584  Adoption and intention of the usage of shared mobility through Technology Acceptance Models: Systemic analysis of literature through PROKNOW-C
ID 602  Analysis of Factors Affecting Road Traffic Accidents in the City of Makati Philippines  
Rodiel L. Rodriguez, Jan Tricia B. Villamaria, and Marvin I. Noroña, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

ID 705  Macroscopic Simulation Models to Evaluate Alternatives for Connecting Districts across Rivers  
Oscar Jara, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile  
Carlos Hernández, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile

ID 708  Development of Rapid Macroscopic Traffic Simulation Models  
María García, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile  
Carlos Hernández, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile

ID 714  Applying Microscopic Simulation Models to Improve Existing Road Transport Infrastructure  
Isaac Gutiérrez, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile  
Carlos Hernández, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile

ID 715  Implementing Macroscopic Simulation Models to Evaluate Complementary Waterbus Routes  
Josefina Ávila, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile  
Carlos Hernández, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile

Keynote 6:00 – 7:00 pm, Monday, April 5, 2021

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

Lean Six Sigma Panel Session
7:00 – 8:30 PM, Monday, April 5, 2021

Panel Chair

Dr. Joseph M. Ogundu  
President/CEO  
Emerald Global Consulting Inc.  
West Bloomfield, Michigan

Panel Speaker I  

Prof. Dr-Ing. Carlos Hernandez  
Instituto de Ingeniería Industrial  
Universidad Austral de Chile

Panel Speaker II

Nikhil Pal  
Assistant Lean Six Sigma Manager  
Jabil  
Singapore

Panel Speaker III

Dr. Elizabeth Cudney  
Associate Professor of Business Data Analytics  
John E. Simon School of Business  
Maryville University  
St Louis, Missouri, United States

Panel Speaker IV

Felix Veroya, PIE, AAE, MBB, CSM, DHum  
Founder & CEO
IEOM Sao Paulo Conference

PARALLEL SESSIONS

April 5-8, 2021

Ask Lex PH Academy
Batangas, Philippines

Panel Speaker V

Dr. Jorge Kurita
Professor and Research Director
Universidad Nacional de Asuncion
Paraguay

Panel Speaker VI

Michael Parent, MBA
Managing Director at Right Brain Consulting
Lean Six Sigma Black Belt at AAA
Canton, Michigan, United States

9:00 pm Brazil time, Monday
7:00 am Jakarta time, Tuesday  Technical Session  Room A

Session Chair: Manik Mahachandra, Diponegoro University, Indonesia

ID 630  Ergonomics Redesign of Mountain Backpack for Female Hikers in Indonesia
M Mahachandra, H Prastawa, Z F Rosyada, and T Zulva, Diponegoro University, Tembalang, Semarang, Central Java, Indonesia

ID 631  Analysis of Implementation Level and Barriers in Implementing Quality Management System ISO 9001 in Electricity Sector Company: A Case of PT. ABC
W A Hendarto and R D Kusumastuti, Department of Management, Faculty of Economics and Business, University Indonesia, Jakarta, Indonesia

ID 632  Analysis of Handgrip Strength and Anthropometric Measurements of Manufacturing Workers in the Philippines
K A Mariñas, School of Graduate Studies, Mapúa University, Manila, 1002 Metro Manila, Philippines
R A Robiels, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, 1002 Metro Manila, Philippines
Yung-Tsan Jou, Industrial and Systems Engineering Department, Chung Yuan Christian University, Zhongli District, Taoyuan City, Taiwan

ID 633  Analysis of Factors that Affecting Safety Risk Perception in Oil Refinery Industry
I R Pratama, R S Dewi, and A Sudiarno, Department of Industrial and System Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

ID 634  Analysis Factors that Influence Mall Customer Loyalty in Semarang
N B Puspitasari, D I Rinawati, Z F Rosyada and A T Jonenetha, Department of Industrial Engineering, Diponegoro University, Semarang, Indonesia

ID 635  Concise Consumer Needs for Women Muslim Fashion by Integrating Online Product Reviews and Designer Voice
Y D Nurcahyanie, Industrial Engineering Department, PGRI Adi Buana University, Surabaya, Indonesia
M L Singgih and D S Dewi, Industrial and System Engineering Department, Sepuluh Nopember Institute of Technology, Surabaya, Indonesia

ID 636  Categorizing Suppliers in an Indonesian Shipping Company Using Kraljic’s Portfolio Model
Muningrum and R D Kusumastuti, Department of Management Faculty of Economics and Business, Universitas Indonesia, Jakarta, Indonesia

ID 637  Case Study: Knowledge Management System (KMS) using the Maynard Operation Sequence Technique (MOST) Approach to Improve Manufacturing Efficiency at CV. XYZ Leathercraft
G K Sidanta and N Susanto, Departement of Management and Industrial Engineering, Faculty of Industrial Engineering, Diponegoro University, Indonesia

9:00 am Jakarta time, Tuesday  Technical Session  Room A

Session Chair: Manik Mahachandra, Diponegoro University, Indonesia

ID 638  Development of a Multi Echelon Economic Dispatch Model for Combined Optimization Between The Production and Distribution Side of The Electricity
Wahyuda, Industrial Engineering, Mulawarman University, Samarinda, Indonesia

ID 639  Designing Facility Layout Using Business Intelligence Approach: A Case Study in an Amusement Arcade
T Octavia, S Hallim and C Alianto, Industrial Engineering Department, Petra Christian University, Surabaya, Indonesia

ID 640  Data Analytics for Transforming Towards Smart Supplier Relationship Management (A Case Study in Manufacturing Company)
D Anggrahini, N Kurniati, A P Sukma, Sepuluh Nopember Institute of Technology, Surabaya, Indonesia

ID 641  Driving Factors of the Intention to Purchase Travel Products Through Online Travel Agent (OTA)
N B Puspitasari, R Purwaningsih, N Fadlia, and Z F Rosyada, Department of Industrial Engineering, Faculty of Engineering, Diponegoro University, Semarang, Indonesia

ID 642  Evaluation of Chair Dimensions, Anthropometric Measurements and Subjective Comfort Among Filipino High School Students: A Structural Equation Modelling Approach

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**Parallel Sessions**

*April 5-8, 2021*

**ID 643**  Environmental Impact Reduction in Broiler Chicken Farm Using Life Cycle Assessment in the Implementation of Circular Economy  
P A Wicaksono and D Kaswara, Industrial Engineering Department, Faculty of Engineering, Diponegoro University, Semarang, Indonesia

**ID 644**  Enterprise Risk Management Disclosure and Firm Value: The Role of Risk Monitoring Committee  
N W Rusliarini and N N A Suryandari, Accounting Department, Mahasaraswati Denpasar University, Denpasar, Indonesia

**ID 645**  Eliminating Shadow Warehouse and Improving Inventory Performance in A Nickel Mine Company  
R Mulyati, I N Pujawan and I Vanany, Department of Industrial and Systems Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

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**11:00 am Jakarta time, TUESDAY**  
Technical Session  
Room A

**Session Chair:** Manik Mahachandra, Diponegoro University, Indonesia

**ID 646**  Economic Order Quantity Model Considering Product Damage and Permissible Delay in Payment  
R Y H Silitonga and C Iskandar, Institut Teknologi Harapan Bangsa

**ID 647**  Economic Evaluation of Burner Unit Removal Project at Nickel Processing Company  
H Irawan and E Widodo, Department of Industrial and System Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

**ID 648**  Examining Inventory Management for Spare-Part Warehouse  
D Ermawanto and N Kurniati, Department of Industrial and System Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

**ID 649**  Food Security Model in Corn Commodity Concerning on Welfare of Corn Farmers and Chicken Farmers in East Java  
N M C Utami, I Vanany, D I Maftuhah, L M Jaelani and G Hajar, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

**ID 650**  Impact of Brand Image, Halal Status, and Government Certification on Purchasing Decisions for Food and Beverages  
A Bakhtiar, N R Ningsih, and N M Sari, Department of Industrial Engineering, Diponegoro University, Semarang 50275, Indonesia

**ID 651**  Impact of Infrastructure Development on Economic Growth (Case Study of Lumajang Regency): A System Dynamics Approach  
M B A Reski and B Wirjodirdjo, Department of Industrial Engineering, Institut Teknologi Sepuluh Nopember Institute of Technology, Surabaya, Indonesia

**ID 652**  Inventory Control for Electrical and Instrumentation Spare Parts in Cement Industries  
Y Munda and E Widodo, Department of Industrial and Systems Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

**ID 653**  Joint Decision between Maintenance Strategy of Heavy Equipment and Production Planning  
M A Reski and B Wirjodirdjo, Department of Industrial Engineering, Institut Teknologi Sepuluh Nopember Institute of Technology, Surabaya, Indonesia

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**1:00 pm Jakarta time, TUESDAY**  
Technical Session  
Room A

**Session Chair:** Manik Mahachandra, Diponegoro University, Indonesia

**ID 654**  Joint Economic Lot Sizing at Two Levels of Supply Chain in Food and Beverage Industry  
M Anshori, N H Isnaini and G Adriansyah, Industrial Engineering, Universitas Maarif Hasyim, Latif, Ngelom Megare Taman Sidoarjo

**ID 655**  Maintenance Cost Optimization on Heavy Equipment Tires by Goal Programming Method at Nickel Mine Operation, Dwinda S Wibowo and Budi Santosa, Department of Industrial and Systems Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

**ID 656**  Neglected Pregnant Women in Surabaya: A System Analysis to Provide Necessary Support  
M Anlyasari, Department of Industrial and System Engineering, Sepuluh November Institute of Technology, Surabaya, Indonesia

**ID 657**  P300 and Vigilance Level of University Student under Hot and Humid Condition  
W Budiawan, Department of Industrial Engineering, Diponegoro University, Indonesia

**ID 658**  Retail Pricing Strategy for Supply Chains: Literature Review and Research Opportunity  
N I Arvitrida, N A Savitri and R J Pramudita, Department of Industrial and Systems Engineering, Sepuluh Nopember Institute of Technology, Surabaya, 60111, Indonesia

**ID 659**  Risk Analysis in Mini Container Loading and Unloading Activities at Dock Company  
A B T P Dharana, S G Partiwi and P Suwignjo, Department of Industrial Engineering, Sepuluh Nopember Institute of Technology, Surabaya, Indonesia

**ID 660**  Risks Analysis for Production and Distribution System in Local Water Supply Utility  
N Khalid, Department of Technology Management, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

**ID 661**  Spare Part Inventory Management with a Cross-functional Perspective
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<td>3:00 pm Jakarta, TUESDAY</td>
<td>Technical Session</td>
<td>Room A</td>
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<tr>
<td>ID 662</td>
<td>Strategic Role of Procurement Function on Private Hospital</td>
<td>H Suliantoro, A S Utomo, N U Handayani, N B Puspitastari, and D Pujotomo, Department of Industrial Engineering, Faculty of Engineering, Diponegoro University, Semarang, Indonesia</td>
</tr>
<tr>
<td>ID 663</td>
<td>Study of the Effect of Service Quality toward Customer Loyalty in Financial Service Industry at PT Bank Rakyat Indonesia (Persero) Tbk as an Intervening Variable</td>
<td>M E Br Sipayung, A Bakhtiar, and N U Handayani, Magister Program of Engineering and Industrial Management, Diponegoro University, Soedharto, Semarang, Indonesia</td>
</tr>
<tr>
<td>ID 664</td>
<td>Study on Process Innovation at Indonesia State-Owned Enterprises</td>
<td>P Suwignjo, I K Gunarta, N A Wessarian, Industrial and Systems Engineering Department, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia</td>
</tr>
<tr>
<td>ID 665</td>
<td>Supply Chain Performance Measurement with Supply Chain Operation References Approach (a Case Study in a Batik Company)</td>
<td>N Susanto, R Purwaningsih, R Rumita and E Septia, Industrial Engineering Department, Faculty of Engineering, Diponegoro University, Indonesia</td>
</tr>
<tr>
<td>ID 666</td>
<td>System Dynamic Model for Restaurant's Food Waste in Surabaya</td>
<td>S A Oktaviarsi, I Vanary, and D I Maftuhah, Department of Industrial Engineering, Institut Teknologi Sepuluh Nopember, Surabaya Indonesia</td>
</tr>
<tr>
<td>ID 667</td>
<td>The Analysis of Factors Affecting The Buying Interest in Poultry Frozen Food Processed Product</td>
<td>R Purwaningsih, N Susanto, N Purba, and A A A Putri, Department of Industrial Engineering, Diponegoro University, Semarang, Indonesia</td>
</tr>
<tr>
<td>ID 668</td>
<td>The Effect of Financial Ratios and Macroeconomics on Stock Return in Infrastructure Sector</td>
<td>G Mayliana, E Chumaidiyah and R Zulbett, Industrial Engineering, Telkom University, Jl. Telekomunikasi 1 Bandung, Indonesia</td>
</tr>
<tr>
<td>ID 669</td>
<td>The Effect of Soygurt Fortification with Black Rice Bran Extract Anthocyanin in Hyperlipidemia: Preliminary Step of Food Product Development</td>
<td>E P Nurlaili, Faculty of Agricultural Technology, University of 17 Agustus 1945, Semarang, Indonesia</td>
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| 5:00 pm Jakarta, TUESDAY   | Technical Session                                                                               | Room A                                                                                           |
| ID 670                     | Understanding the Effects of Satisfaction and Trust on E-Repeat Purchase Intention: An Ergonomic Approach | D S Dewi, A Sudiarso, R S Dewi, and J Antorang, Institut Teknologi Sepuluh Nopember, Surabaya Indonesia |
| ID 671                     | The Influence of Day Time, Traffic Density and Rush Hour on Mobile Phone Use Among Indonesia Motorcycle | Amelia, G B Pratama, and A Widianti, Department of Industrial Engineering, Bandung Institute of Technology, Bandung, Indonesia |
| ID 672                     | Workload analysis for laboratory and sample house employees in mining industry using Full-Time Equivalent | A A A Djabba 1, 2, M L Singgih1 and I Vanany1, 1 Department of Industrial and Systems Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia |
| ID 673                     | Service Quality Assessment of E-Wallet                                                            | M M Ulkhaq, A Cahyo, A Rustanti, L Gobel, M Dasminar, and E V Wijaya, Department of Industrial Engineering, Diponegoro University, Semarang, Indonesia |
| ID 674                     | Designing Education Development Model: The Educational Supply Chain                                | B Susanto, E Chumaidiyah and H Amin, Industrial Engineering, Telkom University, Jl. Telekomunikasi 1 Bandung, Indonesia |
| ID 675                     | Evaluation of Business Model on E-Commerce PT. XYZ Using Business Model Canvas Approach           | V B Pratiwi and E Chumaidiyah, Faculty of Industrial Engineering, Telkom University, Bandung, Indonesia |
| ID 676                     | Lot-Sizing Single Item Model with Stochastic Demand, Multiple Suppliers, Backlogging and Quantity Discounts | A Sriyono, S Martini and M D Abufath, Faculty of Industrial Engineering, Telkom University, Bandung, Indonesia |
| ID 677                     | Physiological and Biochemical Measures of Mental Workload of Air Traffic Controllers: A Systematic Literature Review | A Widiartini, U Ciptomulyono, and R S Dewi, Industrial and Systems Engineering Department, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia |
ID 678  Asymmetric Relationship in Supply Chain: A Conceptual Framework and Research Opportunities
S S Alrosjid, I N Pujawan and I N Arvitrida, Department of Industrial and System Engineering, Sepuluh Nopember Institute of Technology, Kampus ITS Sukolilo, Surabaya 60111, Indonesia

7:00 pm Jakarta time, TUESDAY  Technical Session  Room A
Session Chair: Manik Mahachandra, Diponegoro University, Indonesia

ID 679  Mobile Phone Use Behaviour of Taxi Riders: A field Experiment
F P Sari, G B Pratama and A Widianti, Department of Industrial Engineering, Institut Teknologi Bandung, Indonesia

ID 680  The Contribution of Intellectual Capital on Indonesian Banks’ Risk Management
A W S Gama, Department of Management, Mahasaraswati Denpasar University, Indonesia
N L P Wiagustini, I B P Sedana, and I B A Purbawangsa, Department of Management, Udayana University, Indonesia

ID 682  Aircraft Redelivery Project Risk Assessment: A Case Study in Maintenance, Repair and Overhaul (MRO) Company
A A Pratiwi, N A Wessiani, H Dzakiyah and U Nurhalizah, Department of Industrial Engineering, Faculty of Industrial Technology and System Engineering, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia

ID 685  The Evaluation of Reverse Logistic as Indicator of the Green Material Management Performance in a Construction Project: A Literature Review
S A Wardani and N U Handayani, Industrial Engineering Departament, Diponegoro University, Semarang, Indonesia
M A Wibowo, Civil Engineering Departament, Diponegoro University, Semarang, Indonesia

ID 686  Coming Together is A Beginning: A Review of Business Incubator and Digital Startup Company
A Setiawan and Arviansyah, Faculty of Economics and Business, Universitas Indonesia, Jakarta, Indonesia

9:00 pm Jakarta time, TUESDAY  Supply Chain Management  Room A
Session Chair: Manik Mahachandra, Diponegoro University, Indonesia

ID 689  A Review of Respiratory-Based Measurement Methods for Assessing The Cognitive Workload
S A Salma, Telkom University, Indonesia
A Widianti, Bandung Institute of Technology, Indonesia

ID 690  Understanding “IS Effectiveness and Efficiency”: Based on Management Levels in the Organization
A Widianto and A P Subriadi, Department of Information System, Sepuluh Nopember Institute of Technology, Surabaya 60111, Indonesia

ID 691  Analysis of Supply Chain Performance Based on the Supply Chain Management Maturity Level in Manufacturing Industry
N Trisnawati and I N Pujawan, Department of Industrial and System Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

ID 692  The Effect of Relational Benefits, Service Quality, and Product Quality on Customer Satisfaction and Loyalty
A D Sastra and I Baihaqi, Department of Industrial and System Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

ID 695  Production and Distribution Model in Cement Industry to Minimize Supply Chain Costs
M R Nooranda and I Vanany, Department of Industrial Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

ID 696  Economic Analysis of Heavy Equipment Supply for Fulfilling Raw Materials
L A Sugiyono and B Syairudin, Department of Industrial and Systems Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

ID 697  Analysis of Stressors Factors on Occupational Stress and Performance Blue Collar Employees in Pharmaceutical Manufacturing
D A Sekti Master’s Degree Study Program of Industrial Engineering, Faculty of Engineering Diponegoro University Semarang, Indonesia
M Mahachandra and N U Handayani Department of Industrial Engineering, Faculty of Engineering Diponegoro University Semarang, Indonesia

ID 698  SCOR and ANP Methods for Measuring Supplier Performance with Sustainability Principle of Green Supply Chain Management in Furniture Company PT. XYZ
P W Hapsari, H Santos, and D Nurkertamanda, Industrial Engineering Department, Diponegoro University, Semarang, Indonesia
## April 6, 2021 (Tuesday) - Session: 8:00 – 9:45 am

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<tr>
<td>8:00 – 8:20 TUESDAY</td>
<td>Global Engineering Education I</td>
<td>1</td>
<td>Dr. Mario Chauca &lt;br&gt; Advisor/reviewer vice-rectorate of research and &lt;br&gt;Researcher Professor at Ricardo Palma University &lt;br&gt;Santiago de Surco, LI 15039, PERU &lt;br&gt;Researcher of the RENACYT-CONCYTEC &lt;br&gt;Executive Committee Member IFEES (2019-2021) &lt;br&gt;Past Director Kenshu Kiokay del Peru-AOTS &lt;br&gt;Past Steering Committee Member IEEE MWSCAS &lt;br&gt;Title: Project Based Learning using successive repetitions in engineering education</td>
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<tr>
<td>8:20 – 8:40 TUESDAY</td>
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<td>1</td>
<td>Prof. Dr. Sanderson Barbalo, PMP &lt;br&gt;Coordinator of Process, Projects and Innovation Research Group of University of Brasilia (GPIPP) &lt;br&gt;Associate Professor of Operations Management Department (EPR) &lt;br&gt;Researcher of the Master and Doctorate Program of Mechatronic Systems (PPMEC) &lt;br&gt;Researcher of the Professional Master in Technology Transfer and Innovation (PROFNIT) &lt;br&gt;University of Brasilia (UnB) &lt;br&gt;Brasília, Brazil &lt;br&gt;Title: Practices for teaching entrepreneurship in undergraduate engineering courses by means of project-based learning approaches</td>
</tr>
<tr>
<td>8:40 – 9:00 TUESDAY</td>
<td></td>
<td>1</td>
<td>Prof. Msc. Gustavo dos Santos De Lucca &lt;br&gt;Coordinator of Cocreation Lab SATC and Computer Engineering Coordinator &lt;br&gt;SATC – Associação Beneficente da Indústria Carbonífera de Santa Catarina &lt;br&gt;Bairro Universitário &lt;br&gt;Criciúma/SC, Brasil &lt;br&gt;Title: Creative Entrepreneurship – A method to improve entrepreneurship to pre-incubator, incubator and classroom's College</td>
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<tr>
<td>9:00 – 9:20 TUESDAY</td>
<td></td>
<td>1</td>
<td>Ricardo Alexandre Diogo &lt;br&gt;Professor Adjunto &lt;br&gt;PUCPR – Pontifícia Universidade Católica do Paraná &lt;br&gt;Curitiba, Paraná, Brazil &lt;br&gt;Title of the Talk: Modernization of Undergraduate Education Program (PMG)</td>
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<tr>
<td>9:20 – 9:40 TUESDAY</td>
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<td>Dr. Francisco I. Giocondo César &lt;br&gt;Professor &lt;br&gt;Department of Industrial Engineering &lt;br&gt;Federal Institute of Education, Science and Technology of São Paulo (IFSP – Campus Piracicaba) &lt;br&gt;Professor and Researcher Collaborator &lt;br&gt;Production Engineering Graduate Program &lt;br&gt;Campinas State University (FCA – UNICAMP – Campus Limeira) &lt;br&gt;Brazil</td>
</tr>
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### Technology Management

<table>
<thead>
<tr>
<th>ID</th>
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<th>Speaker and Details</th>
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<tbody>
<tr>
<td>ID 392</td>
<td>Developing a framework and guidelines for successful CRM &amp; Marketing Automation Implementation</td>
<td>Richard Truncale, Masters of Innovation and Technology, Graduate Student</td>
</tr>
</tbody>
</table>
ID 085 Challenges to Apply Lean Methodology to Coordinate Distribution Logistics  
Mohammad Rahman, Central Connecticut State University, United States

ID 374 Efficiency in technology licensing of science and technology institutions for companies: a systematic review  
Carlos Pusinhól, Debora Taño, and Ana Lúcia Vitale Torkomian, Production Engineering Department, Federal University of São Carlos, São Carlos - São Paulo – Brazil

ID 341 Innovation and Technology Management. - A Study of the Palm-Oil Companies in Santa Marta, Colombia  
Willington G. Gámez Araújo, Department of Industrial Engineering, Antonio Nariño University, 30th Street # 40-46, Santa Marta, COL

ID 357 Triple Helix Relations and Patent Deposition in Innovation Projects at a Large Brazilian University  
André Bassetto Okamura, Industrial Engineer, University of Brasília, Brasília, Brasil

ID 377 Triple Helix, Innovation and Technology Transfer from the Initiative of the Interested Company: Case Study of The Drug VONAU-FLASH and Its Partnership Between USP and Biobab Sanus Pharmacêutica LTDA  
Afonso de Carvalho Costa Lopes, Eduardo Magalhães, Neiane Andreato and Vanessa Araújo Pessoa, Centro de Desenvolvimento Tecnológico de Brasília – CDT, Universidade de Brasília (UNB) - Brasília, DF - Brasil

ID 006 How the evolution of Digital Twin on the cloud with AI, is making easy to manage Asset Integrity remotely  
Claudio Makarovsky, Siemens Ltda, Brazil

ID 260 Modeling Algorithms for Expert Medical Image Recognition  
Benjamin Arbisala, Toyin Enikuomehin, Rahman and Shola, Department of Computer Science, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos, Nigeria

ID 333 Prediction of Cutting Force during Rotary Ultrasonic Machining of Titanium Alloy using Artificial Intelligence Technique  
Mustafa M. Nasr and Abdulaziz Altamimi, Industrial Engineering Department, King Saud University, Riyadh, Kingdom of Saudi Arabia

ID 227 Robotics & Mobile Computing: Algorithmic Paradigms for Medical Chest X-Rays in Africa  
Owoeye Oluwatobi Michael, Principal Investigator and Software Developer, Handsonlabs Software Academy RC 2467766

ID 123 Seismic Vulnerability Assessment of The Road Network, Applying Machine Learning Models: Case study Bucaramanga, Colombia  
López Velandin Aldemar, Sandoval Bernal Fabián Leonardo, Martínez Quezada Daniel, and Lamos Diaz Henry, Department of Industrial Engineering of the Industrial. Universidad Industrial De Santander (UIS) , Bucaramanga, Colombia

ID 031 The Application of Decision Tree Regression to Optimize Business Processes  
Mike Sishi and Arnesh Telukdarie, Post Graduate School of Engineering Management, University of Johannesburg, South Africa

ID 566 Assessing Disruptive Crises of Supply Chain in Firms Amidst Covid-19: An application of Multi Category-SVM using k-means Clustering  
MD Ariful Islam, Shubho Roy, Nishat Farzana Supriti and Naimur Rahman Chowdhury, Department of Mechanical & Production Engineering, Ahsanullah University of Science & Technology, Dhaka, Bangladesh

ID 706 Real Estate Pricing Model Using Machine Learning  
Ingrid Rosales, Instituto de Ingeniería Industrial y Sistemas, Universidad Austral de Chile, Valdivia, Chile

ID 834 Supply Chain Design and Performance Enhancement by Industry 4.0  
MB Kiran, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, India

ID 499 ANSPI: An Analytic Network Process Software Tool  
Michele Kremer Sott, Maikel Luis Kolling, Aline Ramos da Silva, Pablo Venzke Tessmann, Gislene Câssia S. Schwambach, Tulio Cicero Haas Correa Lima, João Victor Kothe, Luciano André Affi, Leonardo B. Furdenau and Liane Mahlmann Kipper, Graduate Program in Industrial Systems and Processes, University of Santa Cruz do Sul, Santa Cruz do Sul – Brazil
ID 586  Global Retail Trade Index. 2004- 2019
Wilson Alexander Pirzón Rueda, Facultad Tecnológica, Universidad Distrital “Francisco José de Caldas”, Bogotá, Colombia
Carlos Andrés Arango Londoño, Departamento de Ingeniería Industrial, Universidad de La Salle, Bogotá, Colombia
Diego Karachas Rodríguez, Facultad de Ciencias Empresariales, Corporacion Universitaria Minuto de Dios, Bogotá, Colombia

ID 620  Risk-Return Analysis in Banking Sector
RENUKA S. and G P DINESH, DMS, BITM, Ballari, Dept. of Management Studies, Ballari, India

ID 505  An Exploratory Research on Startup Firms Operating in Turkey
Eren Özceylan, Industrial Engineering Department, Gaziantep University, Gaziantep, Turkey
İbrahim Halil Korkmaz, Islahiye Vocational School, Gaziantep University, Gaziantep, Turkey
Ayca Özceylan, Öğuzeli Vocational School, Gaziantep University, Gaziantep, Turkey

ID 512  Utilization of Technology and Perceived Complexity
Doni Purnama Alamsyah, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia
Lia Mazia, STMIK Nusa Mandiri, Jakarta, Indonesia
Lukmanul Hakim, Universitas Bina Sarana Informatika, Jakarta, Indonesia
Bambang Sukajie, Chairil M. Noor, Ani Solihat, Universitas ARS, Bandung, Indonesia

ID 551  Perceived Value Mediation Model to Improve Customer Expectation and Loyalty
Tija Fie Tjo, Ronny Samsul Bahri, Doni Purnama Alamsyah, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia
Khādīr Akbar Ghofar, Universitas ARS, Bandung, Indonesia
Heni Rahaeni, Universitas Bhayangkara Jakarta Raya, Jakarta, Indonesia

ID 552  Development of Seasonal Product in Star-Up Business
Natalie Putri, Rudy Aryanto, Chyntia Ika Ratnapuri, Doni Purnama Alamsyah, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

ID 553  Market Growth Strategy through Consumers’ Satisfaction, Product Quality and Brand Image: Evidence from Jakarta 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
Gidion P. Adrinekso, Department of Management Faculty Economics and Business, Universitas Kristen Krida Wacana, Jakarta, 11470 Indonesia
Wilson Rajagukguk, Department of Management Faculty of Economics and Business, Universitas Kristen Indonesia, Jakarta, Indonesia

8:00 – 9:45, TUESDAY
HF
Room 5

ID 776  Vetconnect: E-Commerce Portal for Veterinary Health care Providers and Service Subscriber
Daniele De Guzman, Samuel Mirasol, King Perez, Intal and Grace Lorraine, School of Information Technology, Mapua University Makati, Philippines

ID 759  An Ergonomic Design of Motorized Tricycle in the Philippines
Ma. Janice J. Gumasing and Jonas Liao, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines

ID 760  Assessment of Ergonomic Risk Factors Affecting the Musculoskeletal Discomfort of Daycare Centers Occupants in the Philippines
Ma. Janice J. Gumasing, Kayla Katriz Mae C. Antonio and Joanna Lou C. Mata, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines

ID 761  Predictive Model on the Severity of Injuries and Musculoskeletal Disorders Affecting the Restaurant Kitchen Workers in the Philippines
Ma. Janice J. Gumasing, Kim D. Lustañas, School of Industrial Engineering and Engineering Management, Mapua University, Philippines

ID 756  Public Policy and Indonesian Diplomacy for the Acceleration of International Goods Terminal Development
Elyta, Faculty of Social and Political Sciences, Universitas Tanjungpura, Pontianak, Indonesia
Martoyo, Faculty of Social and Political Sciences, Universitas Tanjungpura, Pontianak, Indonesia

ID 769  Identifying Critical Success Factors in Implementing HVAC Servitization to Encourage Business Model Innovation
Yonatan Suganda and Djoko Sihono Gabriel, Department of Industrial Engineering, University of Indonesia, Jakarta, Indonesia

Inayatulloh, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia
April 6, 2021 (Tuesday) - Session: 10:00 am – 12:50 pm

Keynote Speakers

9:45 – 10:00 am, April 6, Tuesday - **Keynote II (Welcome Address)**

**Professor Paulo Roberto Freitas de Carvalho**  
Director  
FACENS University  
Sorocaba, Sao Paulo, Brazil

10:00 – 10:40 am, April 6, Tuesday - **Keynote III (Opening Keynote)**

**Daniel Scuzzarello**  
Vice President and Country Manager  
Siemens Digital Industry Software South America  
São Paulo, SP, Brazil

Title of Keynote: Digitalization and Industry 4.0 as catalyst for sustainable work

10:40 – 11:20 am, April 6, Tuesday - **Keynote IV**

**Ricardo Mourad**  
Regional Operation Director – South America  
Valeo  
Sao Paulo, SP, Brazil

ID 928: Integration of the Business Strategy with the Operational Excellence Model

11:20 am - 11:30 am: Networking Break

11:30 – 12:10, April 6, Tuesday - **Keynote V**

**João Luís Frare, MBA**  
Industrial Engineering Executive Manager  
Continental Automotive do Brasil Ltda  
São Paulo, Brazil

ID 487 Digital Transformation at Continental World - Examples, Barriers and Corporate Strategies  
João Luís Frare, Head of Production and Industrial Engineering, Autonomous Mobility and Safety Division – BU Hydraulic Brakes Systems,  
Continental Automotive do Brasil Ltda

12:10 – 12:50, April 6, Tuesday - **Keynote IV**

**Prof. Dr. Fernando José Barbin Laurindo**  
Full Professor and Past Department Head  
Production Engineering Department  
Polytechnic School  
University of São Paulo
### April 6, 2021 (Tuesday) - Session: 1:00 – 2:45 pm

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<td>Global Engineering Education II</td>
<td>Room 1</td>
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<tr>
<td>1:00 – 1:20 (Tuesday)</td>
<td>Dr. Augusto Loureiro da Costa</td>
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<tr>
<td>Associate Professor</td>
<td>Department of Electrical Engineering</td>
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<tr>
<td>Programa de Post-graduate Engenharia Eletrica</td>
<td>UFBA – Federal University of Bahia</td>
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<td>Ondina, Salvador – State of Bahia, Brazil</td>
<td>Visiting Scholar – University of Pennsylvania, USA</td>
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<tr>
<td>1:20 – 1:40 (Tuesday) – Room 1</td>
<td>Mariana Tafur, PhD</td>
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<tr>
<td>Assistant Professor</td>
<td>School of Education – CIFE</td>
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<tr>
<td>Los Andes University</td>
<td>Bogotá, Colombia</td>
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<tr>
<td>1:40 – 2:00 (Tuesday) – Room 1</td>
<td>Dr. Alberto Un Jan</td>
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<td>Faculty of Engineering</td>
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<tr>
<td>Universidad Wiener in Lima</td>
<td>Peru</td>
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<tr>
<td>2:00 – 2:20 (Tuesday) – Room 1</td>
<td>Dr. Boris Herbas</td>
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<tr>
<td>Full Time Professor and Researcher</td>
<td>Professor of Manufacturing Engineering and Professor of Statistics</td>
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<tr>
<td>Universidad Catolica Boliviana San Pablo Regional Cochabamba</td>
<td>Cochabamba, Bolivia</td>
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<tr>
<td>2:20 – 2:40 (Tuesday) – Room 1</td>
<td>Professor Juan José Encina Cabrera</td>
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<tr>
<td>Director of the Department of Electricity</td>
<td>Faculty of Engineering</td>
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<tr>
<td>National University of Asuncion of Paraguay</td>
<td>San Lorenzo – Paraguay</td>
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### 1:00 – 2:45, TUESDAY Sustainability Room 2

<table>
<thead>
<tr>
<th>ID</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>041</td>
<td>Green Technologies and their Effects on Agribusiness Performance in Mexico</td>
<td>Ingrid Yadibel Cuevas-Zuñiga, María del Rocio Soto-Flores, and Christian Muñoz-Sánchez, Business School, National Polytechnic Institute of Mexico, Mexico City, Mexico</td>
</tr>
<tr>
<td>113</td>
<td>Greening Education in Brazilian HEI: Disinformation on Environmental Issues</td>
<td>Ursula Maruyama, Business Administration Department, CEFET/RJ, Rio de Janeiro, Brazil, Liz-Rejane Issberner, Postgraduate Program in Information Science, PPGCI, IBICT/UFRJ, Rio de Janeiro, Brazil</td>
</tr>
<tr>
<td>038</td>
<td>Identification and Analysis of the Characteristics of Voluntary Sustainability Standards in the International Market of Agro-Industrial Goods</td>
<td>Diego Alonso García Bonilla, Department of Administration and Organizations, Faculty of Administration Sciences, Universidad del Valle, Cali, Colombia</td>
</tr>
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ID 303  Methodology to take advantage of financing sources for sustainable local development in a Cuban province
Yadira Blanco Cartaya, Planificadora Territorial “A”, Aspirante a doctora en Ciencias Económicas, Universidad de Matanzas, Matanzas, Cuba
Ana Julia Acevedo Urquiaga, Industrial Engineering Program, University Foundation San Mateo, Bogotá, Colombia
Marina Bouzon, Federal University of Santa Catarina, Santa Catarina, Brazil
Liliana López Báster, Aspirante a doctora en Filosofía y Letras de la Universidad de Alicante, Universidad Técnica de Manabí
José Antonio Acevedo Suárez, Logistics and Production Management Laboratory (LOGESPRO), Havana Technical University “José Antonio Echevarría” (CUJAE), Havana, Cuba
Neyle Sablón Cossío, Instituto de Posgrado, Grupo de Producción y Servicios, Universidad Técnica de Manabí, Portoviejo, Ecuador

ID 072  Feasibility of Looped Symbiotic Waste Flow Management System in Harare: Case Study
Ignatio Madanhire, Department of Quality and Operations Management, School of Engineering Management, Faculty of Engineering and The Built Environment, University of Johannesburg, Johannesburg, South Africa
Kumbi Mugwindiri and Charles Mbohwa, Department of Mechanical Engineering, University of Zimbabwe, Harare, Zimbabwe

ID 501  Application of Nanomaterials and Nanotechnology in Addressing Covid-19 Challenges – Review
Sunday A. Afolalu, Ayodeji A, Noiki, Abiodun A. Abioye and Moses E. Emetere; Osese Okwilagwe, Department of Mechanical Engineering, Department of Physics, Covenant University, Ota, Nigeria
Olubisi Omolola, Department of Microbiology, Obafemi Awolowo University, Ile-Ife, Nigeria
Olusegun D. Samuel, Department of Mechanical Engineering, Federal University of Petroleum Resources, Effurun, Delta –State, Nigeria

ID 564  Total Specific Allocation Grant for Population Development and Population Growth in Indonesia
Omas Bulan Samosir, Faculty of Art and Design, Universitas Indonesia

ID 612  Designing a Low-Cost Thermal Energy Storage System for Small-Scale Tobacco Farmers in Zimbabwe
Nelson Shati, Ignatio Madanhire and Tawanda Mushiri, Department of Mechanical Engineering, University of Zimbabwe, Mount Pleasant, Harare, Zimbabwe
Emmanuel Mashonjowa, Department of Physics, University of Zimbabwe, P. O. Box MP167, Mount Pleasant, Harare, Zimbabwe

1:00 – 2:45, TUESDAY
Room 3
Construction Management

Session Chair: Ihsan Al Hosani, PhD in Engineering Management Program, University of Sharjah, Sharjah, UAE

ID 214  A Bibliometric Study of Scientific Research in Urban Planning and Biomedicine in the ME during the Past 50 Years
Atef M. Ghaleb and Moath Alatefi, Department of Industrial Engineering, College of Engineering, King Saud University, Riyadh, Saudi Arabia

ID 021  Architectural Model of Implementation of Building Information Modeling - BIM in the Colombian Construction Industry
Camilo Andrés Vaca Pinilla, Diseñadores de Ambientes de Tecnología DATEC, Universidad Nacional de Colombia sede Bogotá
Carrera 30 #45-10, Edificio 314 Postgrados en Arquitectura - SINDU, Instituto de Investigaciones Tecnológicas, Oficina 4
Lina Nataly Alvarado Ríos, Diseñadores de Ambientes de Tecnología DATEC, Universidad Nacional de Colombia sede Bogotá
Carrera 30 #45-10, Edificio 314 Postgrados en Arquitectura - SINDU, Instituto de Investigaciones Tecnológicas, Oficina 4

ID 318  Evaluation of efficiency trends in the Brazilian construction industry
Carlos Ernani Fries and Daniel Holstak, Department of Production and Systems Engineering, Federal University of Santa Catarina, Florianópolis, SC, Brazil

ID 544  Prioritization of the infrastructural construction projects of industrial parks with the hybrid ANP-BWM method
Mohammad Khalilzadeh, CENTRUM Católica Graduate Business School, Lima, Peru and Pontificia Universidad Católica del Perú, Lima, Peru

ID 502  Developing of Multi-Criteria Decision Making Model in Assessment of Outcomes Based Best Value in UAE Public Construction Sector
Ihsan Al Hosani, PhD in Engineering Management Program, University of Sharjah, Sharjah, UAE
Udechukwu Ojia, and Fikri Dweiri, Industrial Engineering and Engineering Management Department, University of Sharjah, Sharjah, UAE

1:00 – 2:45, TUESDAY
Room 4
Case Studies

Session Chair: Maximilian Espuny, São Paulo State University (UNESP), Engineering School, Campus Guaratinguetá, Guaratinguetá, SP, Brazil

ID 588  SATC Creative Entrepreneurship Program: An Experience Report
Gustavo dos Santos de Lucca, Coordenador de Engenharia da Computação e do Cocreation Lab Satc, Centro Universitário Satc, Criciúma, Brasil
Jovani Castelan, Coordenador Geral Centro Universitário Satc, Centro Universitário Satc, Criciúma, Brasil
Carlos Ernani Fries and Daniel Holstak, Department of Production and Systems Engineering, Federal University of Santa Catarina, Florianópolis, SC, Brazil

ID 550  A Case Study of Inventory Management System for an International Lifestyle Product Retailer in Bolivia
Boris Christian Herbas Torrico and Sebastian Alem Oyola, Exact Sciences and Engineering Research Center (CICEI), Bolivian Catholic University, Cochabamba, Bolivia

ID 476  e-tourism for COVID-19 crisis and its post era
Shahryar Sorooshian, Universiti Malaysia Pahang, Malaysia

ID 543  Reducing the Level of Vibration on Rotating Electric Machines Using Parametric Optimization and Surrogate Models
Rafael de Souza Lopes, Product Engineering Department, WEG Equipamentos Elétricos SA – Energy, Jaraguá do Sul, SC, Brazil
Eduardo Lenz Cardoso, Department of Mechanical Engineering, UDESC, Joinville, SC, Brazil

ID 446  COOLING THE HEAT
April 6, 2021 (Tuesday) - Session: 3:00 – 4:45 pm

3:00 – 4:45, TUESDAY  Global Engineering Education III  Room 1
Session Chair: Antonio Carlos Gomes Junior, FACENS University, Sorocaba, São Paulo, Brazil

3:00 – 3:20 (Tuesday) – Room 1

Dr. Hernán Nina Hanco
Professor, Department of Computer Engineering
Master in Administration and Systems and Computer Engineering
National University of San Antonio Abad
Cusco, Peru

3:20 – 3:40 (Tuesday) – Room 1

Dr. Lilian Adriana Borges
Senior Lecturer and Research Coordinator
Pro-vice-chancellor’s Office for Research
UNIDAVI – Universidade para o Desenvolvimento do Alto Vale do Itajaí
Rio do Sul, Brazil
3:40 – 4:00 (Tuesday) – Room 1

**Dr. Augusto Rocha**  
Associate Professor  
Univiersidade Federal do Amazonas  
Manaus, Amazonas, Brazil

4:00 – 4:20 (Tuesday) – Room 1

**Ignacio Laiton Poveda**  
Docente Investigador  
Escuela Tecnológica Instituto Técnico Central  
Bogotá, Colombia

4:20 – 4:40 (Tuesday) – Room 1

**Antonio Carlos Gomes Junior**  
Engineering Professor  
Director Advisor / Mechanical Eng. Coordinator  
FACENS University  
Sorocaba, São Paulo, Brazil

How we are using 4.0 for education at FACENS and/or how to prepare engineers for 4.0 revolution

### 3:00 – 4:45, TUESDAY  
**Energy**  
Room 2

**ID 120**  
Analyzing Factors Responsible for Energy Use in the Construction Industry  
Oludolapo Akanni Olanrewaju, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

**ID 163**  
Performance Optimization of a New Solid Feeder  
Adriano Gomes de Freitas, Yuri Oliveira Lima, Ricardo Borges dos Santos and Luís Alberto Martinez Riascos, Center for Engineering, Modelling and Social Applied Sciences, Federal University of ABC, Santo André, Brazil  
Vitor Furlan de Oliveira, Post-Graduation Program in Mechanical Engineering, University of São Paulo, São Paulo, Brazil

**ID 273**  
Production Estimation Technique Using Material Balance Equation in Hydraulically Fractured Unconventional Shale Gas Reservoirs  
Rashid S. Mohammad, Muhammad Yaqoob Khan, Syed Jamal-Ud-Din, and Nouman Zobby  
1Energy Systems Engineering Department, Balochistan UET, Khuzdar  
2Petroleum & Gas Engineering Department, BUITEMS, Quetta  
3China University of Petroleum (Beijing), China

**ID 383**  
Researching Electromobility in Brazil: Elements for Building a National Policy  
Sérgio Roberto Knorr Velho, Mechatronics Systems Postgraduate Program, Technology College (FT) - University of Brasília, Brasília, DF, Brazil  
Sanderson César Macêdo Barbalho, Mechatronics Systems Postgraduate Program, Technology College (FT) - University of Brasília, Brasília, DF, Brazil  
Cláudio Albuquerque Frate, Mechanical Engineering Department, Technology College (FT) - University of Brasília, Brasília, DF 70910-900, Brazil

**ID 256**  
Study on Determinant Factors of Economic Feasibility in Generating Wind Power in Northeast Brazil  
Antônio Henriques de Araujo Junior, Department of Production Engineering, Rio de Janeiro State University, Rio de Janeiro, Brazil  
Jose Glênio Medeiros de Barros, Department of Production Engineering, Rio de Janeiro State University, Rio de Janeiro, Brazil  
Nilo Antônio de Souza Sampaio, Department of Mathematics, Physics and Computing, Rio de Janeiro State University, Rio de Janeiro, Brazil  
Bernardo Bastos, Department of Production Engineering, Rio de Janeiro State University, Rio de Janeiro, Brazil  
Luiz de Freitas Ayres, Department of Production and Systems, University of Minho, Braga, Portugal

**ID 027**  
Sustainability Best Practices for Oil and Gas Sector in Mexico  
María del Rocío Soto-Flores, Raúl Rodríguez-Ávila, Christian Muñoz-Sánchez, and Ingrid Yadibel Cuevas-Zuñiga, Business School, National Polytechnic Institute of Mexico, Mexico City, Mexico

### 3:00 – 4:45, TUESDAY  
**Human Factors & Ergonomics**  
Room 3

**ID 379**  
Dark Side of Economic Growth: A Case Study of the Relationship between Economic Growth and Suicide Mortality of Human Factors  
Wilson Rajagukguk, Faculty of Economics and Business, Universitas Kristen Indonesia, Jl. Mayjen Sutojo No.2, Cawang, Jakarta 13630, Indonesia  
Perak Samosir, Study Program on Mechanical Engineering, Institut Teknologi Indonesia, Jl.Raya Puspiptek Serpong, Kota Tangerang Selatan
ID 102  Ergonomic Work Analysis in a Long Term Residency Institution for the Elderly in south of Brazil: REBA Tool and Corlett Diagram Applicability
Isadora Bechert de Modesti, Master Student of the Postgraduate Program in Architecture and Urbanism, Federal University of Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brazil
Gizelli Flôr de Jesus, Master Student of the Postgraduate Program in Architecture and Urbanism, Federal University of Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brazil
Andrea de Aguiar Kasper, Post Doctoral Student of the Postgraduate Program in Architecture and Urbanism, Federal University of Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brazil
Lizandra García Lupi Vergara, Associate Professor of the Postgraduate Program in Production Engineering, Federal University of Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brazil

ID 241  Ergonomic Work Analysis in a Long Term Residency Institution for the Elderly in the South of Brazil
Isadora Bechert de Modesti, Master’s Degree Student of the Postgraduate Program in Architecture and Urbanism, Federal University of Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brazil
Gizelli Flôr de Jesus, Master’s Degree Student of the Postgraduate Program in Architecture and Urbanism, Federal University of Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brazil
Andrea de Aguiar Kasper, Post Doctoral Student of the Postgraduate Program in Architecture and Urbanism, Federal University of Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brazil
Lizandra García Lupi Vergara, Associate Professor of the Postgraduate Program in Production Engineering, Federal University of Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brazil

ID 360  Participatory Ergonomics in a Manufacturing Company in Peru
María Teresa Noriega Aranibar and Bertha Díaz Garay, Industrial Engineering Program, Universidad de Lima, Surco, Lima, Perú

ID 312  The Impact of Viewing 2D and 3D movies on Physiological Responses
Mohammed H. Alhaag and Mohamed Z. Ramadan, Industrial Engineering Department, College of Engineering, King Saud University, Riyadh, Saudi Arabia

ID 711  Proposal of a Salary Structure for Positions at Productos Caribe S.A.S.
Luís Sampayo Castellanos, Elianeth Villarreal Sabalza and Carlos Gualdron García, Industrial Engineering Program, Faculty of Engineering, Universidad Tecnológica de Bolívar, Cartagena de Indias, Colombia

Pedro Seolin dos Santos, Universidade Federal de Santa Catarina, Graduate Program in Production Engineering, Florianópolis – SC, Brazil
Lucia M. S. Campos, Universidade Federal de Santa Catarina, Graduate Program in Production Engineering, Florianópolis – SC, Brazil

ID 561  Empirical Modelling of the Water Supply Crisis in the Mpumalanga Province of South Africa
Motsei Ephrey Matlakala and Daramy Vandi Von Kallon, Mechanical Engineering Department, University of Johannesburg, South Africa

ID 713  Restoration of Services in Disrupted Interdependent Infrastructure Systems
Joshua Guevara Díaz, Department of Industrial and Management Engineering, Universidad Ana G. Méndez – Recinto Gurabo José A. Santiváñez, Department of Industrial Engineering, Universidad de Ingeniería y Tecnología- UTEC, Lima – Perú
Raúl Valero, National Autonomous University of Honduras
Lizzette Pérez-Lespie, Congdon School of Supply Chain, Business Analytics, & Info. Systems, University of North Carolina, Wilmington

ID 718  Enhanced Service Level Management Process as a Result of Best Practices Integration
Muhammad Anas AlGhamian, Universitat Politècnica de Catalunya – BarcelonaTech, Barcelona, Spain

3:00 – 4:45, TUESDAY  Room 4
Sustainability

ID 723  Asset Management Policy for Equipment Replacement
Ana Carolina Gandini Panegossi and Ethel Cristina Chiari da Silva, Professional Master's Program in Industrial Engineering, University of Araraquara (UNIARA), Araraquara, SP, Brazil

ID 506  The Use of Circular Economy Indicators to Improve Sustainability in the Recycling Aluminium Context
Paulo Vitor dos Santos Gonçalves, Universidade Federal de Santa Catarina, Graduation Program in Production Engineering, Florianópolis – SC, Brazil
Rafaela Francisca Moreira Barbosa, Universidade Federal de Santa Catarina, Graduation Program in Production Engineering, Florianópolis – SC, Brazil
Vitor Allan Prats Raspini, Universidade Federal de Santa Catarina, Department of Production Engineering and Systems
Simone Sehnem, UNOESC and UNISUL, Graduation Program in Administration
Lucila M. S. Campos, Universidade Federal de Santa Catarina, Department of Production Engineering and Systems

ID 618  Enhanced Service Level Management Process as a Result of Best Practices Integration
Muhammad Anas AlGhamian, Universitat Politècnica de Catalunya – BarcelonaTech, Barcelona, Spain

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### ID 921  Supermarket Simulation
Alex Andrade, Clara Lorenz, Fernanda Osilio, Miguel Heitor, Pedro Ribeiro, Henrique Ewbank de M. Vieira, and Rodrigo Luiz Gigante, Production Engineering Department, Facens University, Sorocaba, BRAZIL

### ID 922  Airport Simulation
Felipe Fraga Santana, Lucca Felippin Rodrigues Faria, Rafael Peres Carmelossi, Tarcisio Antônio Hess Coelho Filho, Henrique Ewbank de M. Vieira and Rodrigo Luiz Gigante, Production Engineering Department, Facens University, Sorocaba, BRAZIL

### ID 923  Chemical Factory Simulation
Lucas Eduardo Pereira, Fernanda Will, Emerson Watanabe, Izabela Cristina, Henrique Ewbank de M. Vieira, and Rodrigo Luiz Gigante, Production Engineering Department, Facens University, Sorocaba, BRAZIL

### April 6, 2021 (Tuesday) - Session: 5:00 – 6:30 pm

#### 5:00 – 6:45, TUESDAY  Project Management Panel  Room 1

**Panel Chair**

**Dr. Carlos Gualdrón**  
Project Management Specialist & Professor  
Universidad Tecnológica de Bolívar  
Colombia

**Panel Speaker I**

**Dr. Darjat Sudrajat, CSCA, CSCM**  
Head of Business Management Program &  
Sr. Lecturer  
BINUS Business School  
Jakarta, Indonesia

**Panel Speaker II**

**Jonas Vieira**  
Founder at FALA Education  
Sorocaba, São Paulo, Brazil

**Panel Speaker III**

**Fábio Caversan**  
Digital Business and Innovation Vice President  
Stefanini US  
Southfield, Michigan, United States

**Panel Speaker IV**

### 5:00 – 6:45, TUESDAY  Sustainability in Supply Chain  Room 2

**Session Chair**: Alécio Julio da Silva, Department of Mechatronics and Mechanical System Engineering, USP – University of São Paulo, São Paulo, SP, Brazil

**ID 140  Analysis of the sustainability management model in the productivity of small and medium enterprises. Case study in the city of Bogotá D.C.**  
Oscar A. Vásquez-Bernal, School of Basic Science, Technology and Engineering, Universidad Nacional Abierta y a Distancia UNAD, Bogotá D.C, Colombia  
William E. Mosquera-Laverde, Faculty Administrative and Economic Sciences, Universidad Cooperativa de Colombia, Bogotá D.C, Colombia

**ID 004  Sustainable Close-loop Supply Chain Management: An Empirical Investigation of Critical Practice and Performance Factors**  
Tushar Khatri, Student, Mechanical Engineering Department, Thapar Institute of Engineering and Technology, Patiala, (Punjab State), India  
Jitendar K. Khatri, Management Consultant, Gurgaon, India

**ID 098  Using electrostatic precipitators to achieve a sustainable supply chain inside the coal power plant**  
Asmaâ EL BOURI CAMEL, Laboratoire LAPSSII, EST de Safi Université Cadi Ayyad, and CED: Sciences de l’Ingénieur, FST de Marrakech  
Khalid BENHIDA, EST de Safi, Université Cadi Ayyad, and Laboratoire LAPSSII, EST de Safi  
Said EL FEZAZI, EST de Safi, Université Cadi Ayyad, and Laboratoire LAPSSII, EST de Safi
ID 068  **CEFET/RJ's contributions to society: monitoring sustainable practices with Brazilian Sustainable Logistics Management Plan**  
Bruno Zeltone, Department of Civil Engineering, Centro Federal de Educação Tecnológica Celso Suckow da Fonseca (CEFET/RJ), Rio de Janeiro, Brazil  
Aline Trigo, Strategy Division for Institutional Environmental Sustainability, Centro Federal de Educação Tecnológica Celso Suckow da Fonseca (CEFET/RJ), Rio de Janeiro, Brazil  
José Aires Trigo, Department of Business Management, Universidade Estácio de Sá (UNESA), Rio de Janeiro, Brazil  
Ursula Maruyama, Department of Business Management, Centro Federal de Educação Tecnológica Celso Suckow da Fonseca (CEFET/RJ), Rio de Janeiro, Brazil

ID 122  **Decision-making the applicability of the use of the WMS System in the management of medicine stock**  
Adriana Formigone, Graduate Studies in Production Engineering, Paulista University – UNIP, SP 04026-002, Brazil  
José Benedito Sacomano, Teacher of Production Engineering Department, Paulista University – UNIP, SP 04026-002, Brazil

ID 385  **The Life Cycle Cost Calculation as an enabler of Product Sustainability**  
Antonio Henrique Duarte, Production Engineering Department, Faculty of Technology, University of Brasília, Brasília, DF, Brasil  
Sanderson César Macêdo Barbalho, Production Engineering Department, Faculty of Technology, University of Brasília, Brasília, DF, Brasil  
Luciano Sales, Production Engineering Department, Faculty of Technology, University of Brasília, Brasília, DF, Brasil  
Rodrigo Augusto dos Santos, Computer science and engineering department, The University of Texas at Arlington, Arlington, USA

ID 474  **Game Theory Supporting a Decision-Making Process to Reduce Losses in Hydro Generating Plants Overhaul Delays**  
Álculo Julio da Silva, Department of Mechatronics and Mechanical System Engineering, USP – University of São Paulo, São Paulo, SP, Brazil  
Marjorie Maria Bellinello, Department of Mechanical and Maintenance Engineering, UTFPR – Federal University of Technology of Paraná, Guarapuava, PR 85053-525, Brazil  
Gilberto Francisco Martha de Souza, Department of Mechatronics and Mechanical System Engineering, USP – University of São Paulo, São Paulo, SP 05508-900, Brazil  
Adherbal Caminada Netto, Department of Mechatronics and Mechanical System Engineering, USP – University of São Paulo, São Paulo, SP 05508-900, Brazil  
Carlos Alberto Murad, Department of Mechatronics and Mechanical System Engineering, USP – University of São Paulo, São Paulo, SP, Brazil  
Silvio I. Nabeta, Department of Energy and Electrical Automation, University of São Paulo, Av. Prof. Luciano Gualberto, 380 trav. 3, São Paulo, São Paulo, ZIP 05508-900, Brazil

5:00 – 6:45, TUESDAY  
**Industry 4.0**  
Room 3

ID 008  **Production disturbances handling: where are we and where are we heading to?**  
Adriana Ito, Torbjörn Ylppää, and Anders Skoogh, Department of Industrial and Materials Science, Chalmers University of Technology, Gothenburg, Sweden  
Per Gullander, RISE Research Institute of Sweden, Gothenburg, Sweden

ID 161  **Computational Suitability for Industry 4.0 Implementation in Companies of the Metropolitan Region of Soroca-SB**  

ID 334  **Fine-tuning e-CO2 Mixture in Recompression Brayton Power Cycle during Operation: a Control System Proposal**  
Robert Valencia-Chapi, Escuela Técnica Superior de Ingenieros Industriales, Universidad Politécnica de Madrid, Madrid, Spain  
Facultad de Ingeniería en Ciencias Aplicadas, Universidad Técnica del Norte, Av. 17 de Julio, 5-21.100105 Ibarra, Ecuador  
Luis Coco-Enríquez, Escuela Superior de Ingeniería y Tecnología, Universidad Internacional de la Rioja, Av. de la Paz, 137, 26004 La Rioja, Spain  
John Paul Mayorga-Jines, Escuela Técnica Superior de Ingenieros Industriales, Universidad Politécnica de Cartagena, C/ Doctor Fleming, s/n. 30202 Cartagena, Spain  
Ángel Martínez-Rodríguez, Javier Muñoz-Antón, Escuela Técnica Superior de Ingenieros Industriales, Universidad Politécnica de Madrid, C/ José Gutiérrez Abascal, 2. 28008 Madrid, Spain

ID 029  **Fourth industrial revolution: Implications for the water sector in an African Context**  
Medoh Chuks; Telukdarie Arnesh; and Mahlangu Sydney, Post Graduate School of Engineering Management, University of Johannesburg, Auckland Park, 2092, South Africa

ID 219  **Industry 4.0 Education at the Mechatronics Engineering Course in UTFPR**  
Luiz Carlos A. Rodrigues, Department of Mechanics, Campus Curtiba (DAMEC-CT), Federal University of Technology – Paraná (UTFPR), Curitiba, PR 81280-340, Brazil

ID 182  **Industry 4.0 Readiness Assessment for Apparel Industry: A Study in Sri Lankan Context**  
Erandika Lakmali, Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka  
Kasuni Vidanagamachchi, Department of Industrial Management, University of Kelaniya, Sri Lanka  
Julian Nanayakkara, University of Kelaniya, Sri Lanka

ID 617  **Review of Heavy-Duty Materials Handling Systems in the Era of Industry 4.0**  
S.Z. Mafokwane, and D.V.V. Kallon, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa

5:00 – 6:45 pm, TUESDAY  
**Manufacturing**  
Room 4

ID 069  **Modeling and Analysis of Laser Sintering Process Scanning Time for Optimal Planning and Control**  
1, 2 Agarana Michael C, 3,4 Akinlabi Easter T, 1 Pule Kholopane,  
1 Department of Quality and Operational Management, University of Johannesburg, South Africa
ID 475  Design of an Automated Paper Cutting Machine
Sara AlDrais, Fatmah AlZhraa Ibrahim, Nourah AlFouderi, Ali Mamedov
College of Engineering and Technology, American University of the Middle East, Kuwait

ID 610  Analytical Evaluation Criterion for Optimal Process Cost of Additive Manufacturing Process Planning and Control
1, 2 Agarana Michael C, 3,4 Akinlabi Easter T, 1Pule Kholopane,
1 Department of Quality and Operational Management, University of Johannesburg, South Africa
2 Department of Mathematics, Covenant University, Ota, Nigeria
3 Pan African University for Life and Earth Sciences Institute, Ibadan Nigeria
4 Department of Mechanical Engineering, Covenant University, Ota, Nigeria

ID 611  Exploratory Study of Meta-Heuristic Optimization of Laser Metal Deposition Repair Process of Damaged Parts
1, 2 Agarana Michael C, 3,4 Akinlabi Easter T, 1Pule Kholopane,
1 Department of Quality and Operational Management, University of Johannesburg, South Africa
2 Department of Mathematics, Covenant University, Ota, Nigeria
3 Pan African University for Life and Earth Sciences Institute, Ibadan Nigeria
4 Department of Mechanical Engineering, Covenant University, Ota, Nigeria

ID 618  Material selection of a Tri-adjustable Automated Heavy-Duty Handling System Designed on Industry 4.0 Principles
S.Z. Mafokwane and D.V.V. Kallon, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa

ID 726  Initial Diagnosis and Design Proposal for the Quality Management System of the Company AC Alumcristal LTDA in Cartagena-Colombia under the ISO 9001: 2015 Standard
Carlos Gualdron García, Gustavo Marrugo and Jesus Junco, Industrial Engineering Program, Faculty of Engineering, Universidad Tecnológica de Bolívar, Cartagena de Indias, Colombia

April 6, 2021 (Tuesday) - Session: 7:00 – 8:30 pm
Room 1

7:00 – 8:30 pm, TUESDAY
Global Engineering Education Panel

Panel Chair

Ricardo Alexandre Diogo
Professor Adjunto
PUCPR - Pontifícia Universidade Católica do Paraná
Curitiba, Paraná, Brazil

Panel Speaker I

Dr. Lorena Bearzotti
Profesor Auxiliar
Escuela de Transporte
Pontificia Universidad Católica de Valparaíso
Valparaiso, Chile

Panel Speaker II

Keshav Nandurkar, PhD
Professor and Principal
K.K. Wagh Institute of Engineering Education & Research

Session Chair:

April 6, 2021 (Tuesday) - Session: 7:00 – 8:30 pm
Room 5

5:00 – 6:45, TUESDAY

Session Chair:
Panel Speaker III

**Dr. Esther Matemba**
Engineering Education Advisor- Lassonde Educational Innovation Studio (LEIS)
Lassonde School of Engineering, York University, Canada
Governing Board Member for Research in Engineering Education Network (REEN) - Africa representative
Sessional Academic, Curtin University, Western Australia

Panel Speaker IV

**Professor Donald M. Reimer**
Director of Membership and Chapter Development – IEOM Society
President, The Small Business Strategy Group, Detroit, Michigan, USA
Adjunct Faculty – A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering
Lawrence Technological University, Southfield, Michigan, USA

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**April 6, 2021 (Tuesday) - Session: 8:30 – 11:45 pm**

**8:30 – 11:45 pm, TUESDAY**

**Technical Session**

**Room A**

**Session Chair:** Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

**ID 838** The Role of the Government and Health Educators on Community Behavior and Its Impact on Oral and Dental Health in the Work Area of the Community Health Center in Central Mamuju District
- I Md Dana, Hasmin Tamsah, Purnomo Purnomo, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
- Fitriani, Universitas Puangrimaggalatung, Wajo, Indonesia
- Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

**ID 839** The Influence of Experience, Education, And Training, and Work Environment on The Performance of Village Midwives in Bulukumba Regency
- Hermawali Yusuf and Hasmin Tamsah, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
- Eddyman W. Ferial, Universitas Hasanuddin, Makassar, Indonesia
- Haslina Haslan, Institut Sains dan Kesehatan Bone, Makassar, Indonesia
- Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

**ID 840** The Effect of a Healthy Environment and Facilities on The Level of Houser Comfort Through the Effectiveness of Management of Rusunawa Lette, Makassar City
- Rosnani and Baharuddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
- A. Tenri Fitriyah, Universitas Bosowa Makassar, Indonesia
- Jeffriansyah DSA, STIE Muhammadiyah Mamuju, Indonesia
- Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

**ID 841** The Effect of Hospital Image and Service Quality to Discharge Against Medical Advice (DAMA) Through Patient Satisfaction at The Majene District Hospital
- Sitti Harma, Ekafadly Jusuf and Mansur Azis, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
- Indah Restika BN, STIKes Nani Hasanuddin, Makassar, Indonesia
- Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

**ID 842** The Influence of Community Health Centre (Puskesmas) Planning and Mini-Workshop on Employee Performance through Motivation
- Iriani and Abdul Latief R, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
- Ekafadly Jusuf, Universitas Hasanuddin, Makassar, Indonesia
- Arni AR, Universitas Puangrimaggalatung, Makassar, Indonesia
- Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

**ID 843** Performance Improvement with Compensation and Training through the Work Capabilities of Health Workers at the General Hospital of the Makassar City Hajj Area
- Deni Anggrearti Sutomo and Abdul Latief, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
- Fatmawati, Universitas Puangrimaggalatung, Makassar, Indonesia
- Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

**ID 844** Increased Professionalism through Work Discipline and Employee Competence and Its Impact on Employee Performance at the Directorate of Special Criminal Research (Ditreskrimsus)
- Hasmin Tamsah, Ibu Hasyim, and Umi Farida, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
- Rika Damayanti and Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia
ID 845  The Influences of Teacher Professional Competencies and Infrastructure on Teacher Performance Through Teaching Devices of Technical Implementation
Masrullah, Buyung Romadthoni, Hasbi, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Zarina Akbar, Universitas Negeri Jakarta, Jakarta, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 846  The Influence of Competence and Motivation on The Discovery of Tb Patients Through the Quality of Officer Services in The Health Office Polman
Ahmad and Akmal Umar, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Ekafadly Jusuf, Universitas Hasanuddin, Makassar, Indonesia
Hasnawati, Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 847  The Influence of Leadership and Work Motivation on Work Effectiveness through Discipline
Kasmiaty, Baharuddin, and Muhammad Nur Fatnah, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Nasaruddin H, STISIP 17-8-1945 Makassar, Indonesia
Misnawati, Yusriadi Yusriadi, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 848  Effect of Competence and Compensation on Job Satisfaction through Employee Performance of the Health Service Office of West Sulawesi Province
Syamsyucri and Hasmin Tamsh, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Eddyman W. Ferial, Universitas Hasanuddin, Makassar, Indonesia
Ryryn Suryaman Prana Putra, Institut Ilmu Kesehatan Pelamonia Kesdam XIV/ Hasanuddin, Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 849  Implementation of K3 Risk Management and Minimum Service Standards (SPM) on Health Worker Performance through Workload
Sitti Aisa Nur, Hendra Gunawan, Trimaya Cahya Mulat, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Elyani, Universitas Tjut Nyak Dhien, Medan, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

8:30 – 11:45 pm, TUESDAY  Technical Session  Room B
Session Chair: Ashar, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia

ID 850  The Influence of Work Experience and Motivation on Nurse Performance through Caring Behavior in the Inpatient Room of the Labuang Baji Regional General Hospital Makassar
Wildaringgrift, Sayrhruddin and Abubakar Betan, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Devy Febrianti, Universitas Muhammadiyah Sidenreng Rappang
Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 851  Analysis of Regional Financial Management Systems and Intellectual Capital through Work Capabilities on the Quality of Regional Financial Management in Mamuju Regency
Santim Raharja Kusuma, Umi Farida and Hasmin Tamsh, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Andi Terry Sose, STIM Lasharan, Makassar, Indonesia
Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 852  Performance Improvement and Compensation with the Work Environment through the Work Discipline of Nurses at the Labuang Baji Regional General Hospital
Riri Andriani, Gunawan Bata Ilyas and Trimaya Cahya Mulat, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Geminastiti Sakkir, Universitas Negeri Makassar, Makassar, Indonesia
Gustika Sandra, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 853  The Influence of Work Environment and Work Discipline on Nurse Performance Through Professionalism
Arsyad, Hasmin Tamsh and Hasan Nongkeng, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Sahruddin Malik, Universitas Islam Makassar, Makassar, Indonesia
Gustika Sandra, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 854  The Influence of Knowledge, Compensation for Documentation Upbringing Treatment through Motivation Nurse in Mamuju Regional General Hospital
Sultan, Hasmin Tamsh and Hasan Nongkeng, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Jumra, Gustika Sandra, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 855  The Effect of Drug Prices, Facilities on Customer Satisfaction through Service Quality
Dian Harisman, Abdul Latief and Dari Darti, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Watty Rimalia, Universitas Pancasakti, Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 856  The Effect of Compensation and Work Environment On Employee Performance With Team Work As A Mediation Variable At The Makassar Main Port Authority Office
Fauzan Amrullah, Ansar and Abdul Latief R, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
A Arifuddin, Universitas Bosowa, Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 857  The Effect of Education Level and Health Facilities on Maternal Participation through Health Services at Binuang Health Center, Polman District, Polewali
ID 858  Analysis of the Behavior of Clean and Healthy Living Communities
Samrah AT and Mansur Azis, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Ekafadly Jusuf, Universitas Hasanuddin, Makassar, Indonesia
Zarina Akbar, Universitas Negeri Jakarta, Jakarta, Indonesia
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

ID 859  The Influence of Education and Training and Work Facilities on Employee Performance through Work Ability at the Human Resources Development Agency of South Sulawesi Province
Andi Ismawati Mastulen, Hasmin Tamsah, Gunawan Bata Ilyas, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Zarina Akbar, Universitas Negeri Jakarta, Jakarta, Indonesia
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

ID 860  The Effect of Workload on Performance through Time Management and Work Stress of Educators
Ashar, Syahrudin and Nasruddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Zarina Akbar, Universitas Negeri Jakarta, Jakarta, Indonesia
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

ID 861  The Effect of Workload on Performance through Time Management and Work Stress of Educators
Ashar, Syahrudin and Nasruddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Zarina Akbar, Universitas Negeri Jakarta, Jakarta, Indonesia
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

8:30 – 11:45 pm, TUESDAY    Technical Session
Room C
Session Chair: Masrah Hasan, Universitas Puangrimaggalatung, Makassar, Indonesia

ID 862  The Influence of Education Level and Behavior on Clean and Healthy Lifestyle through Quality in the Work Area of the Madello Community Health Center, Barru Regency
Risnawati, Baharuddin and Muhammad Nur Fattah, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
L.M. Zainul, Universitas Balikpapan, Indonesia
Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 863  The Effect of Education and Community Income on Clean and Healthy Behavior through Motivation in Tandukalua District, Mamasa Regency
Fitria, Hasmin Tamsah, Muhammad Yahya, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Ahif Hidayat Tumanggor, Universitas Amir Hamzah, Medan, Indonesia
Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 864  Effect of Competencies and Incentives on Performance through Job Satisfaction
Irna Anggriana Bahari, Akmal Umar and Darti Darti, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Zakir Muhammad, Sekolah Tinggi Ilmu Ekonomi Panca Bakti, Palu, Indonesia
Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 865  Analysis of Soft Competence with Intellectual Capital and Talent Management and its Impact on Service Quality at Mega Bank Regional Makassar
Salmahwati Saleh, Gunawan Bata Ilyas, Umar Syafriuddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Elpisah, STKI Pembangunan Indonesia, Makassar, Indonesia
Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 866  Analysis of Service Quality Improvement with Education and Training and Professionalism and Teamwork as Mediation Variables
Baso Achmat, Baharuddin, Misbahuddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Safirul Irfan, Politeknik Pelayaran Surabaya, Indonesia
Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 867  The Influence of Organizational Culture, Locus of Control and Self Efficacy on the Performance of Civil Servants of Education Personnel
Fatmawati, Hasmin Tamsah, Buyung Romadhoni, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Rainha Kapilale, Universitas Pattimura, Maluku, Indonesia
Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 868  Improving the Welfare of the Poor with Quality Assistants and Quality of the Family Hope Program (PKH) in Community Empowerment in Makassar City
Saharuddin, Ansar, Syahrudin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Yenni Kurnia Gusti, STIE Widya Wiwaha, Yogyakarta, Indonesia
Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia
Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 869  Analysis of the Influence of Leadership Style and Work Environment on Apparatus Performance in Improving Service Quality
Muhammad Rusli, Baharuddin, Muhammad Yahya, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Dhaniel Hutagalung, STIE Insan Pembangunan, Tangerang, Indonesia
Yusradi Yusradi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

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ID 870  Effect of Compensation and Competence on Employee Performance through Employee Development  
Syahrir, Nasruddin, Mansur Azis, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Khamsi Waruwu, Universitas Tjul Nyak Dhen, Medan, Indonesia  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 871  The Effect of Regional Original Income and Capital Expenditure Management against Economic Growth of Mamuju Tengah Regency through Performance Effectiveness Regional Finance  
Andi Syahrul Asfar, Muh. Akob, Gunawan Bata Ilyas, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Muh. Abdult. Anwar, Universitas Muhammadiyah Sidenreng Rappang, Makassar, Indonesia  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 872  The Influence of Motivation and Competence on Employee Performance through Organizational Commitment at Regional General Hospitals in Majene Regency  
Rahmitasari, Ansar, Ekafadly Jusuf, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Ery Wardaningesih, Universitas Puangrimaggalatung, Makassar, Indonesia  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 873  The Influence of Nurse Therapeutic Communication, Knowledge, and Attitudes on Inpatient Satisfaction at Labuang Baji General Hospital in Makassar City  
Arjunedin, Hasmin Tamsah, Abubakar Betan, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Nirmawati Darwis, Universitas Puangrimaggalatung  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 874  The Influence of Competence and Motivation on The Discovery of Tb Patients Through the Quality of Officer Services in The Health Office Polman  
Ahmad and Akmal Umar, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Ekafadly Jusuf, Universitas Hasanuddin, Makassar, Indonesia  
Masrah Hasan, Universitas Puangrimaggalatung, Makassar, Indonesia  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

8:30 – 11:45 pm, TUESDAY  
Technical Session  
Room D  
Session Chair: Arifin Tapi Oyihoe, Universitas Pattimura, Maluku, Indonesia

ID 875  The Influence of Transformational Leadership Style and Soft Competence on Performance and Service Quality in West Sulawesi Provincial Government  
Beb Syahndy Jhon, Hasmin Tamsah, Gunawan Bata Ilyas, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Darmawati Manda, Universitas Bosowa Makassar, Indonesia  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 876  The Influence of Supervision of Heads of Rooms and Knowledge of Implementing Nurses on Patient Safety through the Quality of Nursing Services at the Regional Hospital  
Kasmiaty, Baharuddin, and Muhammad Nur Fattah, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Ika Swasti Putri, STIE Adi Unggul Bhirawa, Surakarta  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 877  The Influence of Individual Characteristics and Work Experience on Family Planning Services (KB)through the Competence of Midwives at Public Health Centers (Puskesmas)  
Nurhilal, Nasruddin Nawawi and Eddyman W. Ferial, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Hasnawati, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia  
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

ID 878  The Effect of Counseling Guidance Services and Infrastructure on Learning Achievement through the Social Attitudes of Students  
Mustari, Mislia and Abdul Haris, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Abdul Rahman R, Universitas Tomakaka, Mamuju, Indonesia  
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

ID 879  Analysis of the Quality of Counseling and the Economic Conditions of the Households to Stunting Events through 1000 Nutritional Quality Management  
Muhammad Jafar, Darli Darti and Mansur Azis, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Marlia Rianti, Universitas Muhammadiyah Bone, Indonesia  
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

ID 880  The Influence of Competence, Nurse Motivation on Patient Satisfaction through the Professional Nursing Care Model (MAKP) Team in the Inpatient Room of the West Sulawesi Provincial Hospital  
Hendriani Darno, Baharuddin and Purnomo Purnomo, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Abdul Rahman, Sekolah Tinggi Ilmu Ekonomi Wira Bhakti, Makassar, Indonesia  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 881  The Effect of Education Level and Health Service Management on Stunting Risk through Nutritional Status  
Wahyuni, Muhammad Yahya and Trimaya Cahya Mulat, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia  
Andi Makkulawu Panyiwi Kessi, STIE Tri Dharma Nusantara, Makassar, Indonesia  
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia
ID 882  The Influence of Teaching Experience and Education Level of Teacher Performance Through Work Loads at The Middle School SPF UPT
Asnawati, Mislia, Hasmin Tamsah, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Yusriadi Yusriadi, Abdul Rahman, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 883  The Influence of Leadership and Incentives on Nurse Performance through Motivation in the Inpatient Room of the Makassar General Hospital Labuang Baji
Andri, Baharuddin and Darli Darli, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Abdur Haris, Sekolah Tinggi Ilmu Ekonomi Wira Bakti, Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 884  The Effect of Education and Work on Public Participation in National Health Insurance through Income Levels
Erdavanti and Akmal Umar, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Ekafadly Jusuf, Universitas Hasanuddin, Makassar, Indonesia
Emmi Azis, Universitas Muhammadiyah Bone, Indonesia
Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 885  Analysis of Motivation and Work Programs on the Performance of State Civil Servants through Teamwork
Andi Tenrisanna, Hasmin Tamsah, Umi Farida, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Muhammad Arsad Raharwini, Universitas Pattimura, Maluku, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 886  The Effect of Quality Extension and Education on Clean and Healthy Behavior (PHBS) through Community Understanding in the WTP Area of Public Health Centre
Ahrad, Gunawan Bata Ilyas and Trimaya Cahya Mulat, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Tehubijuluw Zacharias, Universitas Kristen Indonesia, Maluku, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 887  Analysis of Employee Performance through Document and Budget Availability and Its Impact on Work Capabilities at the Social Office of West Sulawesi Province
Rahmat, Baharuddin, Hasan Nongkeng, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Anfin Tapi Oyhoe, Universitas Pattimura, Maluku, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

8:30 – 11:45 pm, TUESDAY

Session Chair: Marniati Syam, Sekolah Tinggi Ilmu Ekonomi YAPI Bone, Indonesia

ID 888  Analysis of Factors Affecting Financial Performance at the Office of the Central Mamuju District Financial Agency
Abdul Rasyid, Mattalatta Mattalatta, Mattalatta, Baharuddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Mega Erdawati, Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 889  The Influence of Education Level, Teaching Experience, and Training on Teacher Pedagogical Competence in the Technical Implementation Unit of State Vocational High Schools
Syamsumarlin, Hendra Gunawan dan Misit, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Nurlaelah Mahmud, Universitas Muhammadiyah Sidenreng Rappang, Indonesia
Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 890  Increasing Work Motivation with State Defense Education and Compensation through Employee Discipline at the XI / Hasanuddin Military Regional Parent Regiment Educational Institution
Suryani, Mattalatta, Syahruddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Satriya Nugraha, Universitas PGRI Palangka Raya, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 891  Implementation of Governance and Utilization of Information Technology on Budget Formulation Performance through Quality of Work in the Government Finance Agency of Central Mamuju Regency
Sri Warin, Gunawan, Hendra Gunawan, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Nur Vida Opu, Politeknik Negeri Balikpapan, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 892  The Influence of Human Relations and Communication on Employee Performance Through Work Ethics in Gowa Regency
Herlinah, Buyung Ramadhoni, Mansur Azis, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Miandhani Denniz Yuniar, Universitas Selamat Sri, Kendal, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 893  The Effect of Classroom Management and Learning Media on Students' Learning Achievement through Teacher Performance
Nasrullah, Abdul Latief R, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Mustari, Universitas Negeri Makassar, Indonesia
Muhammad Ybnu, Universitas Tomakaka, Mamuju, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 894  Analysis of the influence of competency and extension methods on increasing agricultural yields through the application of integrated Technology
Islamia, Mattalatta Mattalatta, Muhammad Natsir, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Samson Laurens, Universitas Kristen Indonesia, Maluku, Indonesia
ID 895  The Role of Work Environment and Leadership on Employee Performance through Employee Work Discipline
Debby, Umi Farida, Hasan Nongkeng, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Muhammad Ybnu, Universitas Tomakaka, Mamuju, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 896  Increasing the Professionalism of Military Teachers with Training and Experience through Competence
Eni Kusiani, Ansar, Syahruddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Muh. Baki, STIH Pengayoman, Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 897  The Influence of Leadership Style on Knowledge Transfer and Organizational Culture for Employee Performance Improvement
Nellyanti, Gunawan, Masur Aziz, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Ratnaawaty, PhD Program STIE AMKOP, Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 898  The Influence of Human Resources and Infrastructure on Service Process and Service Quality
Awaluddin Sam, Gunawan, Buyung Ramadhorni, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Hasanudin, Universitas Muhammadiyah Bone, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 899  The Effect of Service Quality and Health Facilities on Service Process and Service Quality
Awaluddin Sam, Gunawan, Buyung Ramadhorni, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Hasanudin, Universitas Muhammadiyah Bone, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 900  Training and Rewards for Performance Improvement through Personnel Motivation
Muhammad Ikbal, Gunawan, Milka Pasulu, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Marniati Syam, Sekolah Tinggi Ilmu Ekonomi YAPI Bone, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 901  Application of Organizational Culture, in the Application of Work Discipline to Patient Satisfaction through the Quality of Health Services in Indonesia
Wirdawati, Hendra Gunawan, and Abubakar Betan, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Jamiludin Usman, Institut Agama Islam Negeri Madura, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 902  Increasing Visits (Tourism, Education and Training, and Knowledge Management) through the Quality of Tourism Human Resources
Agustri Triono, Baharuddin, and Abdul Latief R, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Firman H, and Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 903  The Effect of Classroom Management and Teacher Performance on Students' Learning Achievement through Learning Motivation
Abdul Kadir, and Mislia dan Baharuddin, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia
Misnawati, Sekolah Tinggi Ilmu Hukum Pengayoman, Makassar, Indonesia

ID 904  The Influence of Hard Competency and Employee Productivity on Company Performance through Social Capital at PT. Celebes Marble
A.Buyung Arma, Hasmin Tamsah, and Mullat Ansar, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

ID 905  The Influence of Work Ethics and Work Experience on Employee Performance through Job Satisfaction at the Regional Secretariat of Central Mamuju Regency
Heranto, Hasmin Tamsah, and Abdul Razak Munir, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Yusriadi Yusriadi, and Andi Asrijal, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia

ID 906  The Influence of Competence and Work Environment on Work Productivity through Work Motivation in Inpatient Rooms at Public Health Centre in Bissapu District, Bantaeng Regency
Nirsah Fitriani, Baharuddin, and Andi Tenri Fitriyah, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia

ID 907  The Influence of the Level of Public Awareness and Public Understanding of the Rules on the Achievement of PAD Targets through the PBB Collection Process
Achmad Anthony Haeba, Akmal Umar, and Mansur Asis, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
Yusriadi Yusriadi, Sekolah Tinggi Ilmu Administrasi Puangrimaggalatung, Makassar, Indonesia
Saidna Zulfikar Bin Tahir, Universitas Iqra Buru, Maluku, Indonesia
April 7, 2021 (Wednesday) - Session: 8:00 – 9:45 am

**8:00 – 9:45, WEDNESDAY**  
**Industry 4.0 / Industry Solutions I**  
**Room 1**

**Session Chair:** Dr. Roberto A. Martins, Federal University of Sao Carlos, Sao Carlos – State of Sao Paulo – Brazil

8:00 – 8:20 (Wednesday) – Room 1  
**Luciano Vermaas**  
Senior Business Development Consultant  
weme  
Campinas, Brazil

8:20 – 8:40 (Wednesday) – Room 1  
**Ms. Joselyne Andramuño Cando**  
Researcher  
Universidad Católica de Santiago de Guayaquil  
Ecuador

Topic: Embedded systems applied to intelligent control

8:40 – 9:00 (Wednesday) – Room 1  
**Dr. Alejandro G. Frank**  
Associate Professor, Department of Industrial Engineering  
Director of the Organizational Engineering Group (NEO-Núcleo de Engenharia Organizacional)  
Chair of Graduate Studies, Industrial Engineering Program  
Federal University of Rio Grande do Sul (UFRGS)  
Research Affiliate, MIT Industrial Performance Center

Presentation: Industry 4.0 ecosystems – challenges for technology providers

9:00 – 9:20 (Wednesday) – Room 1  
**Dr. Roberto A. Martins**  
Full Professor  
Department of Industrial Engineering  
Federal University of Sao Carlos  
Sao Carlos – State of Sao Paulo – Brazil

Title of talk: Performance Measurement System in Industry 4.0

9:20 – 9:40 (Wednesday) – Room 1  
**Nancy Velásquez Villagrán**  
Director at Industry 4.0 Research & Innovation Center  
Researcher of Industry 4.0 and Industrial Cybersecurity  
Professor of Technology and Information Security

Title of the talk: Security Key Factors in the Implementation of Industry 4.0

**8:00 – 9:45, WEDNESDAY**  
**Engineering Education**  
**Room 2**

**Session Chair:** Márcia Terra, Orientadora do Programa de Pós-Graduação em Engenharia de Produção, Unip Universidade Paulista

**ID 065**  
**Robotics as a Playful Tool for Professional and Technical Learning**  
Paulo Henrique Cruz Pereira, Michael Herculano Mesquita e Ryan Gianesini da Silva, Department of Mechatronic, Centro Federal de Educação Tecnológica de Minas Gerais, Campus Varginha, Varginha-MG, BRASIL
ID 231 Information security and quality management systems integration: implementation in an institution specialized in exams organization
Ana Paula Alves Fiore, Ana Lúcia Figueiredo Facin, and Jorge Muniz Jr., São Paulo State University (UNESP), Engineering School, Campus Guaratinguetá, Guaratinguetá, SP, 12516-410, Brazil

ID 159 The Role of Student Organization in Entrepreneurial Education
Márcio Rodrigues de Andrade, Centro Universitário Moura Lacerda, Ribeirão Preto, São Paulo, Brazil
Frederico Bombonatti, Centro Universitário Moura Lacerda, Ribeirão Preto, São Paulo, Brazil
Ana Lúcia Vitale Torkomian, Departamento de Engenharia de Produção, Universidade Federal de São Carlos, São Carlos, São Paulo

ID 492 Engineering Students Motivation in the setting of the fourth industrial revolution
Antonio Carlos Gomes Junior, Engineering Professor, 4.0 Reference Center and Lato Sensu Coordinator, FACENS Faculdade de Engenharia de Sorocaba, Sorocaba, São Paulo, Brazil

ID 514 Optimization of the Shaft Machining Process Using 2k Factorial Design
Jéssica de Assis Dornelles, Jassen Rodrigues da Silva, and Laura Visintainer Lerman, Industrial Engineering Department, Federal University of Rio Grande do Sul, Porto Alegre, Brazil

ID 164 Product, Process and Business Integration in a Global Context
Zbigniew J. Pasek, Industrial Engineering Program, University of Windsor, 401 Sunset Ave, Windsor, ON

ID 541 Do embasamento teórico à parte prática em aulas remotas: experiências de professores no Ensino Médio Técnico
José Geraldo Basante, Aluno do Programa de Pós-Graduação em Engenharia de Produção, Unip Universidade Paulista
Márcia Terra, Orientadora do Programa de Pós-Graduação em, Engenharia de Produção, Unip Universidade Paulista

ID 560 The Role Of Economic And Development Factors On Average National Exam Score At Primary, Junior Secondary, And Senior Secondary Level In Indonesia
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
Gidion P. Adriinexo, Department of Management Faculty of Economics and Business, Universitas Kristen Krida Wacana, Jakarta, Indonesia

8:00 – 9:45, WEDNESDAY Case Studies Room 3
Session Chair: M. M. Manyuchi, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

ID 114 Financial Analysis of a Small Scale Mining Organization-Case Study of Zvicherwa Pvt Ltd, Zimbabwe
M. M. Manyuchi, Department of Mining Engineering and Surveying, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
T. Mudamburi, Department of Technopreneurs, School of Business Sciences and Management, Harare Institute of Technology, Zimbabwe
C. Mbohwa, Department of Mining Engineering, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
E. Muzenda, Department of Chemical Engineering Technology, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
South Africa and Department of Chemical, Materials and Metallurgical Engineering, Faculty of Engineering and Technology, Botswana International University of Science and Technology, P. Bag 16, Palapye, Botswana

ID 315 Internal Control analysis on the purchase of spare parts case studies at PT Nirvana Logistik
Puteri Rachmawati 1, Tri Lestari 1, Mahsina 1, Nurul Qomari 1, Sutopo 1, Rony Wardhana 2, and Abdul Talib Bin Bon 3
1 Faculty Economy, Universitas Bhayangkara, Surabaya, Indonesia
2 Faculty Economy and Business, Narotama University, Surabaya, Indonesia
3 Fakulti Pengurusan Teknologi dan Perniagaan, Universiti Tun Hussein Onn Malaysia (UTHM), Johor, Malaysia

ID 007 Order Picking Operation and Warehouse Layout Optimization in a Textile Industry by using Genetic Algorithm
Maxsuel Vieira Orti and Raimundo C. G. Teive, Laboratory of Applied Intelligence, University of Vale do Itajaí (UNIVALI), Itajaí, SC, Brazil

ID 356 Regional Government Readiness in Dealing with the Eras of Industri 4.0 Revolution in the Industrial Department of Mojokerto City East Java
Ahmad Hasan Afandi, Department of Social and Political Sciences Majapahit Islamic University, Mojokerto, Indonesia
Esther Kembaaw, Department of Agricultural, Pattimura University, Ambon, Indonesia
Nanik Handayani, Ambon State Islamic Institution, Ambon, Indonesia
M. Chairul Basrun Umanailo, Department of Agricultural and Forestry, University of Iqra Buru, Namlea, 97571, Indonesia

ID 045 The Escalation of Commitment. An Empirical Case in Colombia
Martha Lucía Pachón Palacios and Omar Alonso Patiño C., Management, Finance, and Economics Faculty, EAN University, Bogotá, Colombia

ID 316 The Influence Of Public Service Innovation Strategy On Organizational Performance (Study of the Implementation of Promoter Programs at the Surabaya Polrestabes)
Siti Rosyafah 1, Susi Tri Wahyuni 1, Endang Siswati 1, Rony Wardhana 2, and Abdul Talib Bin Bon 3
1 Faculty Economy, Universitas Bhayangkara, Surabaya, Indonesia
2 Faculty Economy and Business, Narotama University, Surabaya, Indonesia
3 Fakulti Pengurusan Teknologi dan Perniagaan, Universiti Tun Hussein Onn Malaysia (UTHM), Johor, Malaysia

ID 332 The Needs for Teaching Pronunciation in Indonesian Secondary Schools
Supeno, Universitas Wijaya Kusuma Surabaya, Indonesia

8:00 – 9:45, WEDNESDAY Teaching and Learning Room 4

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ID 411 English Teaching Techniques and Media Used in Islamic Junior High Schools
Sugeng Susilo Adi, Department of Language Education, Universitas Brawijaya, Indonesia
Tri Hadiyanti Hayuningrum Hartono, Private English Teacher, Malang, Indonesia

Lusy Tunik Muharisiani, Department of English Education, Universitas Wijaya Kusuma Surabaya, Indonesia
Karwanto, Lecturer, Department of Education Management, Universitas Negeri Surabaya, Indonesia
Amrozi Khamidi, Lecturer, Department of Education Management, Universitas Negeri Surabaya, Indonesia
Endang Noerhartati, Department of Agroindustrial Technology, Universitas Wijaya Kusuma Surabaya, Indonesia
Johny Sugiono, Department of English Education, Universitas Wijaya Kusuma Surabaya, Indonesia

ID 412 Teaching Extensive Reading Using Blended Learning
Lusy Tunik Muharisiani 1, Sugeng Susilo Adi 2, Endang Noerhartati 3, Pratwi Dwi Karyati 4, Siti Bariroh 5, Johny Sugiono6, Karwanto 7, Amrozi Khamidi 8, and Heni Sukrisno 9
1, 6 Department of English Education, Universitas Wijaya Kusuma, Surabaya, Indonesia
2 Department of Language Education, Universitas Brawijaya, Indonesia
3 Department of Agroindustrial Technology, Universitas Wijaya Kusuma Surabaya, Indonesia
4 Department of Economic Development, Universitas Wijaya Kusuma, Surabaya, Indonesia
5 Educational Administration Department, Faculty of Teacher Training and Education, Universitas Gresik
7, 8 Lecturer, Department of Education Management, Unesa, Surabaya, Indonesia
9 Department of Mathematic Education, Universitas Wijaya Kusuma Surabaya, Indonesia

ID 491 Teaching Work Measurement through Origami in Developing Countries
Boris Christian Herbas Torrico, Professor of Industrial Engineering, Exact Sciences and Engineering Research Center (CICEI), Livian Catholic University, Cochabamba, Bolivia

ID 493 Risk Map Elaboration in Safety Technological Educational: Teaching Prevention Tool
Maria Isabel Monteiro Trigo, Work Safety college student, CEFET/RJ, Rio de Janeiro, Brazil
Aline Guimarães Monteiro Trigo, Professor and head of the Sustainability Division, CEFET/RJ, Rio de Janeiro, Brazil
Donelie Samira Ferreira Abdalia, Engineer and head of the Occupational Health and Safety Section, CEFET/RJ, Rio de Janeiro, Brazil
Carina da Conceição Rodrigues Acoli Ferreira, Occupational Safety Technician, CEFET/RJ, Rio de Janeiro, Brazil
Úrsula Maruyama, Business Administration professor, CEFET/RJ, Brazilian Ministry of Education, Setec/MEC, Brasília-DF, Brazil
José Aires Trigo, Post graduation in Business Administration and Development, UNESA University, Rio de Janeiro, Brazil

ID 615 Open Source E-Learning Model Base on Cloud Computing Technology
Inayatulloh, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia

ID 623 E-Logistic SMEs Model: Information Technology to Support SMEs Logistic
Inayatulloh, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia

ID 717 Machine Learning for Predictive Maintenance
Dwi Kusumariningrum, Nani Kurniati, Budi Santosa, Department of Industrial and Systems Engineering, Sepuluh Nopember Institute of Technology, Surabaya, 60111, Indonesia

ID 719 Enabling Predictive Maintenance Using Machine Learning in Industrial Machines With Sensor Data
Adelina Zian Andriani, Department of Industrial and Systems Engineering, Sepuluh Nopember Institute of Technology, Surabaya, 60111, Indonesia
Nani Kurniati and Budi Santosa, Department of Industrial and Systems Engineering, Sepuluh Nopember Institute of Technology, Surabaya, 60111, Indonesia

ID 694 Call for Triple Helix Innovation Collaboration in Changing the Covid-19 Pandemic Environment
Hadi Purnomo, Universitas Gadjah Mada (UGM), Indonesia and Universitas Kristen Immanuel (UKRIM), Indonesia
Wakhid Slamet Ciptono, Universitas Gadjah Mada (UGM), Indonesia
Hargo Utomo, Universitas Gadjah Mada (UGM), Indonesia
Kusdhianto Setiawan, Universitas Gadjah Mada (UGM), Indonesia

ID 604 Total Productive Maintenance in the Philippine Rice Production Sector
Charmine Sheena R. Saflor and Marvin I. Noroña, School of Industrial Engineering and Engineering Management, Mapú University, Manila, Philippines

ID 700 Driver Sleep Detection and Alarming System
Marianne B. Calayag, Diana Marie S. Cortez, Jasmine I. Gaspar, Junell R. Mananquil, John Leslie B. Manuzon, Department of Industrial Engineering, Bulacan State University, City of Malolos, Bulacan

ID 737 A Supply Chain Environmental Sustainability Model for Micro-Enterprises in the Philippine Food Industry
Rey Arth C. Andaya, Raphael Bernard L. Bonifacio, and Marvin I. Noroña, School of Industrial Engineering and Engineering Management, Mapú University, Manila, Philippines

ID 603 Developing a Susceptibility Index for Elderly Care Management in the Philippines: A Systems Perspective
Joanne Christine C. Brodit and Marvin I. Noroña, School of Industrial Engineering and Engineering Management, Mapú University, Manila, Philippines

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ID 568  Assessing Performance and Improving Productivity through Identification of Sewing Defects: A Multi Criteria Based Case Study in an Apparel Firm in Bangladesh
Sharmine Akther Liza, Dept. of Mechanical and Production Engineering, Ahsanullah University of Science and Technology, Dhaka, Bangladesh
Naimur Rahman Chowdhury, Dept. of Mechanical and Production Engineering, Ahsanullah University of Science and Technology, Dhaka, Bangladesh
MD Rakib Rayhan, Dept. of Industrial and Production Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

April 7, 2021 (Wednesday) - Session: 10:00 am – 12:50 pm

Keynote Speakers

9:45 – 10:00, April 7, Wednesday - Keynote VII (Welcome Address)

Prof. Eduardo Antonio Modena
Rector/Dean
Federal Institute of Education, Science and Technology, Sao Paulo

10:00 – 10:40 am, April 7, Wednesday - Keynote VIII

Cláudio Araujo Rocha
Senior Consultant of D&L Associates
Head of Powertrain Manufacturing LATAM / Powertrain Manufacturing Director (retired), FCA Fiat Chrysler Automobiles LATAM, Brazil

10:40 – 11:20 am, April 7, Wednesday - Keynote IX

Edinaldo Fancio
Manufacturing, Engineering & Quality Manager
Eaton Corporation, Valinhos, São Paulo, Brazil

ID 930: Industry 4.0 and the New Generational Operational Excellence challenges and Opportunities

11:20 – 11:30 – Break

11:30 am – 12:10 pm, April 7, Wednesday - Keynote X

Dr. Antonio Henriques de Araujo Junior
Professor, Department of Production Engineering, College of Technology
State University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil

ID 929: Technological & Engineering Education and the Development of the Brazilian Aeronautical Industry

12:10 – 12:50 April 7, Wednesday - Keynote XI

Dr. Antonio Carlos Gomes Junior
Coordenador de Engenharia Mecânica e Centro 4.0 / Assessor Diretoria
Centro Universitário FACENS, Sorocaba, São Paulo, Brazil

Title of the Talk: Engineering Students Motivation in the setting of the fourth industrial revolution
April 7, 2021 (Wednesday) - Session: 1:00 – 2:45 pm

1:00 – 2:45, WEDNESDAY  Industry 4.0 / Industry Solutions II  Room 1
Session Chair: Regis Ataides, Director, South America Channel, Siemens Digital Industry Software, São Paulo Area, Brazil

1:00 – 1:20 (Wednesday) – Room 1

**Eliane R. Rodrigues**
Managing Partner of Zorfatec innovation consultancy
Researcher of LabEI-UFABC/CAPES
Factory of the future-Poli/USP, Brazil

Companies Strategies and Transformation for Maturity in Industry 4.0

1:20 – 1:40 (Wednesday) – Room 1

**Professor Walther Azzolini Junior**
University of São Paulo (USP)
School of Engineering São Carlos (SESC)
São Paulo, Brazil

Title of the talk: System integration with emphasis on increased manufacturing process productivity in textile industry

1:40 – 2:00 (Wednesday) – Room 1

**Prof. Dr. Renato de Oliveira Moraes**
Depto de Engenharia de Produção
Escola Politécnica
Universidade de São Paulo
San Paulo, Brazil

New demands to the CIO (Chief Information Officer) brought by new technologies such automation, machine learning, natural language, etc.

2:00 – 2:20 (Wednesday) – Room 1

**Icaro Gargione**
Automation Engineer
SICK
São Paulo, São Paulo, Brazil

2:20 – 2:40 (Wednesday) – Room 1

**Regis Ataides**
Director, South America Channel
Siemens Digital Industry Software
São Paulo Area, Brazil

1:00 – 2:45, WEDNESDAY  Room 2

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1:00 – 2:45, WEDNESDAY  Data Analytics  Room 3
Session Chair: Babatunde Idowu, Assoc. Prof, Department of Physics, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos Nigeria

**ID 259 Algorithmic Paradigms for Medical Image Segmentation**
Benjamin Aribisala, Department of Computer Science, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos. Nigeria
Toyin Enikuomehin, Department of Computer Science, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos. Nigeria
Rahman, Department of Computer Science, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos. Nigeria
Olabanjo Olusola, Department of Computer Science, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos. Nigeria

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ID 229  Analytics of Radio Refractivity & Refractivity Gradient: A Machine Learning Approach  
Babatunde Idowu, Assoc. Prof, Department of Physics, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos Nigeria  
Ogungbe, Assoc. Prof, Department of Physics, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos Nigeria  
Cornelius Kunle Ogabi, Senior Lecturer, Department of Physics, Faculty of Science, Lagos State University, Lagos Nigeria  
Adejo, Department of Physics, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos Nigeria  
Owoeye Oluwatobi Michael, Principal Investigator and Software Developer, Handsonlabs Software Academy

ID 228  Analytics of Spatio Temporal Characteristics of Rainfall in Africa: A Machine learning Approach  
Babatunde Idowu, Assoc. Prof, Department of Physics, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos Nigeria  
Ogungbe, Assoc. Prof, Department of Physics, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos Nigeria  
Cornelius Kunle Ogabi, Senior Lecturer, Department of Physics, Faculty of Science, Lagos State University, Lagos Nigeria  
Adejo, Assoc Prof, Department of Physics, Faculty of Science, Lagos State University, Lagos-Badagry Expressway, Lagos Nigeria  
Owoeye Oluwatobi Michael, Software Developer/Principal Investigator, Handsonlabs Software Academy

ID 125  Applying Data Mining Techniques and Analytic Hierarchy Process to the Food Industry: Estimating Customer Lifetime Value  
Fátima Carneiro, Kaizen Institute Western Europe, Faculty of Engineering of the University of Porto, INESC TEC, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal  
Vera Miguéis, Faculty of Engineering of the University of Porto, INESC TEC, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal

ID 224  Regression & Predictive Analytics of the Nigerian National Currency [Part 2]: Analyzing the Impact of Inflation & Debt on the Nigerian Economy  
Owoeye, Oluwatobi Michael, Principal Investigator and Software Developer, Handsonlabs Software Academy RC 2467766

Owoeye, Oluwatobi Michael, Software Developer/Principal Investigator, Handsonlabs Software Academy

1:00 – 2:45, WEDNESDAY  Engineering Management  Room 4

ID 261  Contributions to the development of suppliers in competitive environments: a case study in Brazilian companies  
Luiz de Freitas Ayres, Department of Production and Systems – DPS, University of Minho - Campus de Guimarães - Braga, Portugal  
Maria Sameiro Faria Brandão Soares Carvalho, Department of Production and Systems - DPS - Centro Algoritmi, University of Minho - Campus de Guimarães - Braga, Portugal  
Paulo Alexandre da Costa Araujo Sampaio, Department of Production and Systems - DPS - Centro Algoritmi, University of Minho - Campus de Guimarães - Braga, Portugal  
Antônio Henrique de Araujo Junior, Department of Production Engineering, Rio de Janeiro State University, Rio de Janeiro, Brazil

ID 313  5S’s Reinforcement in a manufacturing industry  
Carlos Fajardo-Toro, System Engineering, Unitec, Calle 76 No. 12-58, Bogotá, Colombia  
Paloma Martínez-Sánchez, Industrial Engineering, Unitec, Calle 76 No. 12-58, Bogotá, Colombia  
Ursula Maruyama, Management Department, CETEF, Av. Maracana 229, Bloco E, 1 andar, Maracana – Rio de Janeiro, Brazil  
Fernando Salazar Arrieta, Industrial Engineering, Unitec, Calle 76 No. 12-58, Bogotá, Colombia

ID 406  Production Improvement in SME’s Enterprises through Lean: A Case Study  
Maximiliano Arroyo Ulla, Faculty of Engineering, Santo Toribio de Mogrovejo Catholic University, Chiclayo, Peru  
Lucía Sánchez Celis, Zur Distribution Food Company, Lima, Peru  
Javier Beltran Reyes, Business Intelligence Department, Comercio-Grupo, Lima, Peru

ID 359  Análisis Del Indicador OEE, Determinando Las Causas Que Lo Afectan en La Línea De Envasado De La Industria Licorera Del Cauca  
Leidy Marcela Domínguez Rocha, Jorge Luis Collazos Velasco y Jaime Humberto Mendoza Chacón, Facultad de Ingeniería – Programa Ingeniería Industrial, Fundación Universitaria de Popayán, Popayán, Cauca, COLOMBIA

ID 372  The Effects of Stakeholders Management on Risks: An IT Projects Analysis  
Letícia Barbosa Gomes Figueiredo Filho, Diego de Castro Fettermann and Marina Bouzon, Production and Systems Engineering Department, Univesidade Federal de Santa Catarina (UFSC), Florianópolis, SC, Brazil

ID 240  The Benefits of Carbon Pantograph Strips over Copper Pantograph Strips  
Junior Mabiza, University of Johannesburg, South Africa

ID 239  Possible Causes of HT Burn-Ups on Passenger Trains in South Africa  
Junior Mabiza, Charles Mbohwa and Mbali Myeni, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg, Auckland Park, Johannesburg, 2092, South Africa

1:00 – 2:45, WEDNESDAY  Optimization & Supply Chain Management  Room 5

ID 728  Genetic Algorithm Based on Clark & Wright’s Savings Algorithm for Reducing the Transportation Cost in a Pooled Logistic System

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ID 489  Designing Photonic Devices in a Novel SaaS Electromagnetic Simulator
Paulo H. V. Cândido and Carlos H. Silva-Santos, Instituto Federal de Educação, Ciência e Tecnologia de São Paulo (IFSP) – Campus Itapetininga, Itapetininga-SP, 18202-000, 1571, Brazil

ID 546  Strategic Management to Model Profitability of the Primary Dairy Sector in Colombia
Alejandra Berdugo, Gloria Ramírez and Carmen Pátrino, Department of Industrial Engineering, Universidad de Antioquia, Medellín, Antioquia, Colombia
José Guarín, Department of Agricultural Sciences, Universidad de Antioquia, Medellín, Antioquia, Colombia

ID 724  The Impact of Covid-19 on International Supply Chains Looking Through the SCOR Model
Luiz Carlos Roque Junior, Ricardo Moreira da Silva, Gabriel Francisco Gauer, Germán Glufke Reis, Guilherme Francisco Frederico, Setor de Ciências Sociais Aplicadas, Universidade Federal do Paraná, Curitiba, Paraná, Brazil

ID 545  Milk Collection Optimization in Atlántico, Colombia
Ronald A. Corcho, Juan G. Villegas and Pablo Maya, Department of Industrial Engineering, Universidad de Antioquia, Medellín, Antioquia, Colombia

ID 036  Measuring the Performance of Sustainable Supply Chain Management in the Food Industry
Edgar Guillermo Rodríguez Guevara, Department of Administration and Organizations, Faculty of Administration Sciences Universidad del Valle, Cll. 4B 36-00, Cali, Colombia

ID 580  Recognizing Critical Drivers to Mitigate Supply Chain Disruptions in Pharmaceutical Industry during COVID-19
Naimur Rahman Chowdhury, Sharmin Akther Liza, Syed Tanvir, Abu Saimon Raj and Pritom Mohajon, Department of Mechanical & Production Engineering, Ahsanullah University of Science & Technology, Dhaka, Bangladesh

### April 7, 2021 (Wednesday) - Session: 3:00 – 4:45 pm

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tr>
<td>3:00 – 3:20</td>
<td>Cássio Barbosa</td>
<td>Mechatronic Engineer</td>
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<td>Hedro Sistemas Inteligentes</td>
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<td>3:20 – 3:40</td>
<td>Dr. Mohammed Khadem</td>
<td>Associate Professor</td>
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<td>Department of Industrial Engineering and Engineering Management</td>
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<td>3:40 – 4:00</td>
<td>Carlos Rinck</td>
<td>Coordenador do Curso de Pós- graduação</td>
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<td>4:00 – 4:20</td>
<td>Gustavo (Peçanha Lacerda de) Lima</td>
<td>Solution Business Architect: Industry 4.0 / MES / SCM / ERP / 3D – Strategy &amp; Implementation</td>
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</table>
Lucas Nevado P. de Toledo  
Account Development Engineer – Auto & Tire and CPG – South America  
Siemens PLM Software  
São Paulo, Brazil

3:00 – 4:45, WEDNESDAY  
Entrepreneurship / Innovation  
Room 2

Session Chair: Laura Visintainer Lerman, Department of Industrial Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil

ID 314 Individual Level Characteristics and the Propensity to Form Entrepreneurial Team: The Contingent Role of Individualistic Context  
Nathaly Pinzón Rubio, Universidad de Deusto, Spain

ID 040 Microfinancing for Informal Enterprises: Perspectives in Colombia  
Omar Alonso Patiño C., School of Administration, Finance and Economics, Universidad Ean, Bogotá, Colombia  
Carlos Salcedo-Pérez, School of Administration, Finance and Economics, Universidad Ean, Bogotá, Colombia

ID 160 Process Innovation: A Study of Micro and Small Industries In Sao Paulo  
Adriano Gomes de Freitas, Luis Alberto Martinez Riascos, Alexandre Acácio de Andrade and Júlio Francisco Blumetti Facó, Centro de Engenharia, Modelagem e Ciências Sociais Aplicadas, Universidade Federal do ABC (UFABC), Santo Andre, Brazil  
Bruno Gallotta, Derby Business School, University of Derby, Derby, UK

ID 291 Total Quality Management to Innovate and Export: the Uruguayan case  
Ivana Resnichenko Nocetti, Departamento de la Empresa, Universidad Autónoma de Barcelona, Bella Terra, Barcelona, ES.

ID 408 CalcMedic: Aplicativo de cálculos de dosage  
Bruno Gonçalves Duarte, Tecnólogo do Curso Superior em Tecnologia da Gestão da Tecnologia da Informação, São Paulo, Brasil  
Patrícia Glaucoa Moreno, Professora Mestre do Curso Superior em Tecnologia da Gestão da Tecnologia da Informação, São Paulo, Brasil

ID 272 Requirements of Industry 4.0 from Heavy Automotive Manufacturing  
Jánio Vaz Bragança, Department of Industrial Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil  
Lucas Santos Dalenogare, Grenoble-INP Génie Industriel, Institut Polytechnique de Grenoble, Grenoble, France  
Maria Auxiliadora Cannarozzo Tinoco, Department of Industrial Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil  
Laura Visintainer Lerman, Department of Industrial Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil  
Alejandro Germán Frank, Department of Industrial Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil

ID 271 Digital Capabilities to Support Digital Product-Service Systems  
Daisy Valle Enrique, Department of Electromechanical Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil  
Lucas Santos Dalenogare, Grenoble-INP Génie Industriel, Institut Polytechnique de Grenoble, Grenoble, France  
Laura Visintainer Lerman, Department of Industrial Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil  
Alejandro Germán Frank, Department of Industrial Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil

3:00 – 4:45, WEDNESDAY  
Decision Sciences  
Room 3

Session Chair: Felix A. Cortes-Aldana, Faculty of Engineering, Universidad Nacional de Colombia, Bogotá D.C, Colombia

ID 369 Development of Science and Technology Towards the Formation of Participatory Spaces  
M Chairul Basrun Umanailo, Department of Agricultural and Forestry, University of Iqra Buru, Namlea, 97571, Indonesia

ID 157 Organizational change management in industrial SMEs in the optimization of decision making  
William E. Mosquera-Laverde, Faculty Administrative and Economic Sciences, Universidad Cooperativa de Colombia, Bogotá D.C, Colombia  
Felix A. Cortes-Aldana, Faculty of Engineering, Universidad Nacional de Colombia, Bogotá D.C, Colombia  
Oscar A. Vásquez-Bernal, School of Basic Science, Technology and Engineering, Universidad Nacional Abierta y a Distancia UNAD, Bogotá D.C, Colombia

ID 082 Performance Analysis of Retail Self-Checkouts  
Jin Kyung Kwak, Ewha School of Business, Ewha Womans University, Seoul, Korea  
Shu Zhou, Taeho Park, Lucas College and Graduate School of Business, San Jose State University, San Jose, CA 95192, USA

ID 043 Importance of Economic and Financial Education for Regional and Rural Development  
Omar Alonso Patiño C., Faculty of Management, Finance, and Economics, Universidad EAN, Bogotá, Colombia  
José Augusto Ramírez Díaz, Business School, Fundación Universitaria Agraria de Colombia, Bogotá, Colombia  
Laura Marcela Patiño Gutiérrez, Faculty of Administrative Sciences, Fundación Universitaria Cafam, Bogotá – Colombia

ID 420 Dynamic Capability of Marketing: A Qualitative Study of Indonesian Hotel Industry  
Yokie Radnan Kristyono and Evo Sampetua Hariandja, Department of Management Faculty of Economics and Business Universitas Pelita Harapan, Tangerang-15811, Indonesia

ID 563 Determining the Most Habitable Planet Using Multi-Criteria Decision Making Techniques  
Gizem Gunaydin, Gamze Duvan and Eren Ozceylan, Industrial Engineering Department, Gaziantep University, Gaziantep 27100, Turkey

ID 716 Development of a Global Sustainability Index for G8+5 Countries by Using TOPSIS  
Hisham Alidrisi, Department of Industrial Engineering, King Abdulaziz University, Jeddah, Saudi Arabia
ID 494  Technology in Special Needs Children Education: The Role of CEFET/RJ Napne Service Center
Lidiane Wenderoschy Pedro, Pós-Graduação em Educação Tecnológica, CEFET/RJ, Rio de Janeiro, Brazil
Nélio Georgini da Silva, Special Coordinator of Sexual Diversity, Rio de Janeiro City Hall Administration, Rio de Janeiro, Brazil
Ana Carolina Oliveira de Santana, Business Administration, CEFET/RJ, Rio de Janeiro, Brazil
Marcelo Sampaio Dias Maciel, Business Administration professor, CEFET/RJ, Rio de Janeiro, Brazil
Ursula Maruyama, Business Administration professor, CEFET/RJ, Brazilian Ministry of Education, Setec/MEC, Brasília-DF, Brazil

ID 390  Sistema de Auxílio para a Aprila por meio de Eletrostímulos Funcionais
Arnesh Telukdarie and Silence Lubisi, University of Johannesburg, South Africa

ID 389  System of Assistance for Walking through Functional Electrical Stimulation
Mariana Rodrigues, Leonardo Lemos and Antonio C C Migliano, Centro Universitário Brazcubas, Brazil

April 7, 2021 (Wednesday) - Session: 5:00 – 6:30 pm

5:00 – 6:30, WEDNESDAY    Industry 4.0 / Industry Solutions IV   Room 1
Session Chair: André de Oliveira, BT LATAM Delmia Senior Manager, Dassault Systèmes, São Paulo, SP, Brazil

5:00 – 5:20 (Wednesday) – Room 1
Mário Carneiro
CEO and Founder
Materializa Tecnologia
São Paulo, Brazil
Title: Additive manufacturing as a tool for Innovation inside industries.

5:20 – 5:40 (Wednesday) – Room 1
Ricardo Cassissa Abdala
Especialista / Consultor de soluções PLM
Centric Software
São Paulo, Brazil

5:40 – 6:00 (Wednesday) – Room 1
Juliana Thomé Athié
Materials Coordinator
MSA – The Safety Company
São Paulo, São Paulo, Brazil

6:00 – 6:20 (Wednesday) – Room 1
Leandro Garbin
South America Portfolio Development Manager- Simcenter
Siemens Digital Industries Software
Brazil

6:20 – 6:40 (Wednesday) – Room 1
André de Oliveira
BT LATAM Delmia Senior Manager
Dassault Systèmes
São Paulo, SP, Brazil

5:00 – 6:30, WEDNESDAY    Operations Research    Room 2
Session Chair: Juan Esteban Rojas-Saavedra, Department of Industrial Engineering, Faculty of Engineering, Universidad de Los Andes, Bogota, Colombia

ID 168  A flexible integer linear programming formulation for a class of bus driver rostering problems
Kenny Cárdenas-Parra, Industrial Engineering Department, Universidad Tecnológica de Pereira, Pereira, Colombia
A novel technique of simheuristic for the irregular cutting stock problem with free
Andrés De-лас-Casas and David Álvarez-Martínez, Department of Industrial Engineering, Faculty of Engineering, Universidad de Los Andes, Bogotá, Colombia
Luis Miguel Escobar-Falcón, Program of Systems Engineering, Universidad Libre, Pereira, Colombia
Rubén Iván Bolaños and César Augusto Marín-Moreno, Research, Development & Innovation Department, Integra S.A., Pereira, Colombia

A variable neighborhood search to solve the three-dimensional routing-packing problem with heterogeneous fleet considering fuel consumption
Juan Esteban Rojas-Saaavedra and David Álvarez-Martínez, Department of Industrial Engineering, Faculty of Engineering, Universidad de Los Andes, Bogotá, Colombia
Luis Miguel Escobar-Falcón, Program of Systems Engineering, Universidad Libre, Pereira, Colombia
Rubén Iván Bolaños and César Augusto Marín-Moreno, Research, Development & Innovation Department, Integra S.A., Pereira, Colombia

Two Phase Model for Multi-Product Distribution Planning in a Soft Drink company in the city of Bogotá, Colombia
Oscar Javier Herrera Ochoa, Vianey Lizeth Jerez Amador, Nicolás Arrieta Camacho and Geraldine Camacho Perez, Department of Industrial Engineering, University of La Salle, Candelaria, Bogotá, Colombia

Optimization of Procurement Report and Purchase Order Makeup Problem Using Visual Basic for Applications in Excel
Muhammad Ahmed Kailwar, Muhammad Ali Khan, Department of Industrial Engineering and Management, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan

Identification and analysis of efficiency drivers: Evidences from Brazilian Airports
Prof. Paulo Sodré Hollaender, MSc, School of Applied Sciences (FCA), State University of Campinas, Limeira, BRA
Prof. Antonio Carlos Pacagnella Junior, PMP, PHD., School of Applied Sciences (FCA), State University of Campinas, Limeira, BRA

Wikipedia Edition in 8 Languages. 2001 a 2019
Wilson Alexander Pinzón Rueda, Facultad Tecnológica, Universidad Distrital “Francisco José de Caldas”, Bogotá, Colombia
Carlos Andrés Arango Londoño, Departamento de Ingeniería Industrial, Universidad de LaSalle, Bogotá, Colombia
Jose Martin Díaz, Facultad de Ciencias Empresariales, Corporacion Universitaria Minuto de Dios, Bogotá, Colombia

5:00 – 6:30, WEDNESDAY Environmental Engineering Room 3
Session Chair: Gladys Bonilla-Enríquez, Universidad Popular Autónoma del Estado de Puebla, UPAEP, Puebla, PUE 72410, México

Analyzing the Presence of Pollutants within Warehousing Operations
Gladys Bonilla-Enríquez, Patricia Cano-Olivos, José-Luis Martínez-Flores and Diana Sánchez-Partida, Postgraduate Department of Logistics and Supply Chain Management, Universidad Popular Autónoma del Estado de Puebla, UPAEP, Puebla, PUE 72410, México

Evaluation of Residual Sludges from Gold Mining as a Raw Material to Applications for the Construction Industry
Edison Rivera Figueroa, Depsi Johana Córdoba Mompotes, Diego Fernando Argote Medina, Department of Engineering, University Foundation of Popayan, Popayán, Cauca, Colombia
Natalia Samboni, Department of Environmental Engineering, Autonomous University Corporation of Cauca

Identification of the main topics about Cleaner Production: a guide to directing sustainable industrial practices in the next decade
Vitor H. M. Santos, Thalta L. R. Campos, Maximilian Espuny, and Otávio J. Oliveira, São Paulo State University (UNESP), Engineering School, Campus Guaratinguetá, Guaratinguetá, SP, 12516-410, Brazil

Identifying Variables Associated to Sustainable Development within the Supply Chain
Gladys Bonilla-Enríquez, Patricia Cano-Olivos, José-Luis Martínez-Flores and Diana Sánchez-Partida, Postgraduate Department of Logistics and Supply Chain Management, Universidad Popular Autónoma del Estado de Puebla, UPAEP, Puebla, PUE 72410, México

Modeling Solid Waste Separation Behavior: An Empirical Study in the Federal District of Brazil
Ana Manriano-Melo, Department of Production Engineering, University of Brasilia, Brasilia, CEP 70910-900, Brazil
Patrícia Ramírez-Correa, School of Engineering, Catholic University of the North, Coquimbo, 1781421, Chile
Felipe Mouinho de Oliveira, Department of Production Engineering, University of Brasilia, Brasilia, CEP 70910-900, Brazil

Nano magnetite addition in cement composites: experimental analyses
Junia Nunes de Paula, PhD, Professor in Civil Engineering Department, CEFET-MG
Pedro Ferreira de Melo Burrel, Civil Engineering, CEFET – MG, Belo Horizonte, Brazil
Rodolfo Duarte Souza Alvarenga Santos, Civil Engineering, CEFET – MG, Belo Horizonte, Brazil
Luciana Patrícia Ferreira, MSc, Professor in Civil and Environmental Department, CEFET-MG

Techno-Economic Assessment for The Production of 400 tpd of Sulphuric Acid Using Waste Sulphur Gases from Coal Combustion and Pyrolysis Gases
G.T. Bare, Department of Chemical and Process Systems Engineering, School of Engineering and Technology, Harare Institute of Technology, Zimbabwe
M. M. Manyuchi, Department of Mining Engineering and Surveying, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
S. Chikosi, School of Chemical and Process Systems Engineering, School of Engineering and Technology, Harare Institute of Technology, Zimbabwe

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### Industry Solutions

| ID  | Title                                                                 | Authors                                                                 | Institution                                                                                     |
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| 699 | The Case of Acoustic Cleaning of Industrial Boilers at Sasol Synfuels Power Station in Secunda | P.M. Shandu, D.V.V. Kallon | Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa |
| 538 | Towards the Realization of Engineering Postgraduate Students’ Engagement and Employability: A PBL Involvement in ERP | Amjad Khalili | Department of Mechanical Engineering, Palestine Technical University Kadoorie (PTUK), Former Visiting Fellow to QUT, Tulkarm, West Bank, B.O box 7, Palestine |
| 581 | Innovation in the Auto Industry- A Review of Organizational Structure in Relation to Innovation | Nicholas Evans and Muhammad S Ahmed | Engineering Management, School of Engineering, Eastern Michigan University, Ypsilanti, MI. 48197 |
| 729 | Optimizing University Campus Shuttle Bus Congestion Focusing on System Effectiveness and Reliability: A Combined Modeling Based-Routing Approach | Adeeb A. Kutty, Nasser Al-Jurf, Ayman F. Naser, Murat Kucukvar, Hiba Ayad, Muna Al-Obadi, Galal M. Abdella, Mechanical and Industrial Engineering Department, College of Engineering, Qatar University, Doha, Qatar |
| 515 | Best practices for COVID-19 Test Process in a Hospital Emergency Department | Jéssica de Assis Dornelles, Jassen Rodrigues da Silva, Patrick Ferreira da Silva, Vicente Colombo Júnior and Laura Visintainer Lerman | Industrial Engineering Departament, Federal University of Rio Grande do Sul, Porto Alegre, Brasil |
| 565 | Identification of the Existing Waste and Improvements Opportunities in a Health Plan Insurance Provider Based on the Lean Thinking | Beatriz Goulart, Thayná Belotto, Carla Roberta Pereira, Luciana Rosa Leite and Danielle Bond | Production and System Engineering Department, State University of Santa Catarina – UDESC, Joinville, Brazil |
| 709 | A Comparative Study of Hospital Catering Production System between Thailand and Denmark | Narat Hasachoo and Pornwasin Sirisawat | Business Excellence and Logistics Research Centre, School of Management, Mae Fah Luang University, Thailand |
| 712 | Design of a strategic planning for the company MetalProffice S.A.S in Cartagena-Colombia | MSc.Carlos Guadron, Adrián de Meza and Camila Fuentes | Industrial Engineering Program, Faculty of Engineering, Universidad Tecnológica de Bolívar, Cartagena de Indias, Colombia |

### SCM Panel

| ID  | Title                                                                 | Authors                                                                 | Institution                                                                                     |
|-----|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 515 | Best practices for COVID-19 Test Process in a Hospital Emergency Department | Jéssica de Assis Dornelles, Jassen Rodrigues da Silva, Patrick Ferreira da Silva, Vicente Colombo Júnior and Laura Visintainer Lerman | Industrial Engineering Departament, Federal University of Rio Grande do Sul, Porto Alegre, Brasil |
| 565 | Identification of the Existing Waste and Improvements Opportunities in a Health Plan Insurance Provider Based on the Lean Thinking | Beatriz Goulart, Thayná Belotto, Carla Roberta Pereira, Luciana Rosa Leite and Danielle Bond | Production and System Engineering Department, State University of Santa Catarina – UDESC, Joinville, Brazil |
| 709 | A Comparative Study of Hospital Catering Production System between Thailand and Denmark | Narat Hasachoo and Pornwasin Sirisawat | Business Excellence and Logistics Research Centre, School of Management, Mae Fah Luang University, Thailand |
| 712 | Design of a strategic planning for the company MetalProffice S.A.S in Cartagena-Colombia | MSc.Carlos Guadron, Adrián de Meza and Camila Fuentes | Industrial Engineering Program, Faculty of Engineering, Universidad Tecnológica de Bolívar, Cartagena de Indias, Colombia |

**Session Chair:** Torben Jessen, President Emeritus, Silkeborg Business College, Silkeborg, Denmark
April 8, 2021 (Thursday) - Session: 8:00 – 9:45 am

8:00 – 9:45, THURSDAY  Global Engineering Education V  Room 1
Session Chair: Dr. Sepideh Abolghasem, Department of Industrial Engineering, Universidad de los Andes, Bogota, Colombia

8:00 – 8:20 (Thursday) – Room 1
Dr. Gilson Ditzel Santos
Professor in Management Sciences
Universidade Tecnológica Federal do Paraná
Pato Branco Area, Brazil

8:20 – 8:40 (Thursday) – Room 1
Dr. Diogo Aparecido Lopes Silva
Coordenador Pedagógico do MBS UFSCar
Adjunct Professor
UFSCar – Federal University of São Carlos
Sorocaba, São Paulo, Brazil

8:40 – 9:00 (Thursday) – Room 1
Dr. Rodrigo Zarate
Dean (Decano), School of Administration, Finances and Economics
Professor of Leadership and Management
Universidad EAN
Bogotá, Colombia

9:00 – 9:20 (Thursday) – Room 1
Dr. Sepideh Abolghasem
Assistant Professor
Department of Industrial Engineering
Universidad de los Andes
Bogota, Colombia

9:20 – 9:40 (Thursday) – Room 1
Dr. Luiz Carlos de Abreu Rodrigues
Professor Associado e coordenador do curso de Engenharia Mecatrônica
Universidade Tecnológica Federal do Paraná
Curitiba, PR, Brasil
ID 183  Application of Marketing Strategies in the Mining Sector for Continuous Growth
M. M. Manyuchi, Department of Mining Engineering, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
C. Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
E. Muzenda, Department of Chemical Engineering Technology, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

ID 217  Application of the Situational Leadership Model to Achieve Effective Performance in Mining Organizations Teams
M. M. Manyuchi, Department of Mining Engineering and Surveying, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
C. Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa and Centre of Internationalisation and Business Development, University of Zimbabwe, Zimbabwe
E. Muzenda, Department of Chemical Engineering Technology, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa and Department of Chemical, Materials and Metallurgical Engineering, Faculty of Engineering and Technology, Botswana International University of Science and Technology, P. Bag 16, Palapye, Botswana

ID 118  Assessing the Empowerment Program at a South African Institution of Higher Learning
Sambil Charles Mukawungu, Sandy Ndlovu, Junior Mabiza and Sihle Mankazana, Department of Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa

ID 302  Business Survival Strategies for Small Scale Miners to Remain Afloat in Turbulent Times
M. M. Manyuchi, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
C. Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa
E. Muzenda, Department of Chemical Engineering Technology, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

ID 800  Structural Equation Modeling of Brand Love, Brand Trust, Brand Respect, Brand Loyalty and Brand Equity in Indonesia E-Commerce
Evo Sampetua Hariandja, Faculty of Economics and Business, University of Peltar Harapan, Tangerang, Banten 15811, Indonesia
Titra Theresia Suryanto, Faculty of Economics and Business, University of Peltar Harapan, Tangerang, Banten 15811, Indonesia

ID 833  The Influence Of Lifestyle And Financial Behavior On Personal Financial Management For The Millennia Generation (Study on College Students in Bandung City, Indonesia)
Budi Rustandi Kartawanata, Business Administration, Telkom University, Jalan Terusan Buah Batu, Bandung 40257, Indonesia
Candra Wijayangka, Business Administration, Telkom University, Jalan Terusan Buah Batu, Bandung 40257, Indonesia
Aldi Akbar, Politeknik Pikesi Ganesha Bandung, Jalan Jend. Gatot Subroto No. 301, Bandung 40274, Indonesia
R. Susanto Hendiarto, Universitas Widyatama, Jl. Cikutra no 204 A Bandung 40124, Indonesia
Wapee Manopinives, Center of Healthcare Engineering System, Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Chiang Mai, 50200, Thailand

ID 755  E-Learning Hybrid Model
Inayatulloh, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia
Indra Kusumadi Hartono, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia

ID 763  Mobile Commerce model for Medium and Small-Scale Agriculture in Indonesia
Inayatulloh, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia

ID 142  Blood Shortage Management with a Reactive Lateral Transshipment Approach in a Local Blood Supply Chain
Parmis Emadi and Zbigniew J. Pasek, Industrial Engineering Program, University of Windsor, 401 Sunset Ave, Windsor, ON

ID 764  Community Learning Model for Elementary Schools in the COVID 19 Pandemic
Inayatulloh, Information System Department, School of Information System, Bina Nusantara University, Jakarta, Indonesia
Adé Fadli Fachrul, Character Building Development Center, Bina Nusantara University, Jakarta, Indonesia

8:00 – 9:45, THURSDAY  Business Management  Room 4
Session Chair: Imam Shofwan, Universitas Negeri Semarang

ID 555  Strategic Business Analysis by Using Determinants of Buying Decision on Products: Lessons from an International Company in 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
Gidion P. Adirinekso, Department of Management Faculty Economics and Business, Universitas Kristen Krida Wacana, Jakarta, 11470 Indonesia

ID 559  Innovation Product Development and Satisfaction on Business
Sonya Angela, Idi Jahidi, Santika Syaravina, Doni Purnama Alamsyah, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

ID 562  How Product Quality, Brand Image and Price Perception Impact on Purchase Decision of Running Shoes?
William Steven 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
Gidion P. Adirinekso, Department of Management Faculty Economics and Business, Universitas Kristen Krida Wacana, Jakarta, Indonesia

ID 567  Evaluation of Brand Communication and Service Performance toward Brand Loyalty through Brand Trust as the Mediation Variables of Bank’s Customers
Fuliana Surjana 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

ID 621  The Digital Economy Growth in Indonesia through E-Commerce
Michael Putra Hartanto, Stephanie, Doni Purnama Alamsyah, Bina Nusantara University, Indonesia

ID 622  Job Satisfaction and Organizational Performance: Empirical Evidence from Pakistan’s Banking sector
Muhammad Imran, Fadillah Ismail and Khawar Hussain, Faculty of Technology and Business Management, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, 86400, Malaysia
Faheem Zeb, Business School Qingdao University, Shandong Province, China

ID 799  Portraits of Speech Politeness in Traditional Markets Selling and Buying Interactions and Its Relevance with Language Learning in Highschools
Imam Shofwan, Universitas Negeri Semarang, Indonesia
M. Riyanton, Muslasya Thabib Kariadi, Vera Krisnawati and Nia Ulfa Martha, Universitas Negeri Semarang, Indonesia
Umi Ana Setiars, Universitas Peradaban, Indonesia

ID 810  The Influence of Service Quality and Consumer Trust on Consumer Loyalty of Carousel Apps
Alma Amanda Putri, Aditya Wardhana and Mahir Pradana, Department of Business Administration, Telkom University, Bandung, 40257, Indonesia

ID 822  The Effect of Quality of Work life and Job Stress Toward Organizational Culture
Genna Ayu Maghfira, Mahendra Fakhri, Syarifuddin S, Ida Nurnida, and Benny Kernia, School of Communication and Business Telkom University, Indonesia

ID 903  Application of Critical Path Method (CPM) and S-Curve on Scheduling Deep Water Well Pump Construction Project in Sorong, West Papua
Wiwik Handayani, Faculty of Economics and Business, Universitas Pembangunan Nasional “Veteran” Jawa Timur, Surabaya, Indonesia
Ganistian Ahmad Ganistian, Faculty of Economics and Business, Universitas Pembangunan Nasional “Veteran” Jawa Timur, Surabaya, Indonesia

8:00 – 9:45, THURSDAY  Big Data  Room 5
Session Chair: Simon Vincent W. Bondoc, Mapúa University, Manila, Philippines

ID 472  Determination of Optimum Layout and Marketing Strategies based on Data Mining Technique: A Case Study
Towards a Conceptual Framework on the Importance of Privacy and Security Concerns in Audit Data Analytics
Manal Yunis, Lebanese American University, Ras Beirut, Lebanon

Lecturer Performance Determination Model Based On Adaptive Neuro Fuzzy Inference System (Case Study: Universitas Muhammadiyah Jakarta)
Umni Marfuah, Mutmainah, Renty Anugerah Mahaji Puteri, and Annisa Mulia Rani, Industrial Engineering Department, Engineering Faculty, Universitas Muhammadiyah Jakarta
Andreas Tri Panudju, Industrial Engineering Department, Engineering Faculty, Bina Bangsa University

The Exploration and Investigation of Logistics Processes and Barriers for Medical Supplies Department: A case of Thai Public Hospital
Pornwasin Sirisawat and Narat Hasachoo, Business Excellence and Logistics Research Centre, Logistics and Supply Chain Management Program, School of Management, Mae Fah Luang University, Thailand

Towards a Conceptual Framework on the Importance of Privacy and Security Concerns in Audit Data Analytics
Manal Yunis, Lebanese American University, Ras Beirut, Lebanon

Lecturer Performance Determination Model Based On Adaptive Neuro Fuzzy Inference System (Case Study: Universitas Muhammadiyah Jakarta)
Umni Marfuah, Mutmainah, Renty Anugerah Mahaji Puteri, and Annisa Mulia Rani, Industrial Engineering Department, Engineering Faculty, Universitas Muhammadiyah Jakarta
Andreas Tri Panudju, Industrial Engineering Department, Engineering Faculty, Bina Bangsa University

The Exploration and Investigation of Logistics Processes and Barriers for Medical Supplies Department: A case of Thai Public Hospital
Pornwasin Sirisawat and Narat Hasachoo, Business Excellence and Logistics Research Centre, Logistics and Supply Chain Management Program, School of Management, Mae Fah Luang University, Thailand

Terrylyn M. Narvaez and Marvin I. Noroña, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

A Risk-Based Management Approach in Minimizing Occupational Accidents in Manufacturing Locator Companies in Philippine Special Economic Zones
Simon Vincent W. Bondoc and Marvin I. Noroña, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

Knowledge Based Orchestration: Response to the Dynamic Environmental Covid-19 Pandemic
Hadi Purnomo, Universitas Gadjah Mada (UGM), Indonesia, and Universitas Kristen Immanuel (UKRIM), Indonesia
Wakhid Slamet Ciptono, Universitas Gadjah Mada (UGM), Indonesia
Hargo Utomo, Universitas Gadjah Mada (UGM), Indonesia
Kusdhianto Setiawan, Universitas Gadjah Mada (UGM), Indonesia

The Influence of E-Trust on E-Customer Loyalty of Online Food Delivery Customers in Indonesia (Study Conducted During COVID-19 Pandemic)
Martifa Firli Devi and Mahir Pradana, Department of Business Administration, Telkom University, Bandung, 40257, Indonesia
Diki Wahyu Nugraha, Prodi/Jurusan D4 Teknik Informatika Politeknik Pos Indonesia, Jln. Sari Asih No. 54, 40151 Bandung, Indonesia

The Influence of Promotion and Price on E-Commerce Impulse Purchase in Bandung, Indonesia
Raisa Hanifah and Mahir Pradana, Department of Business Administration, Telkom University, Bandung, 40257, Indonesia
Diki Wahyu Nugraha, Prodi/Jurusan D4 Teknik Informatika Politeknik Pos Indonesia, Jln. Sari Asih No. 54, 40151 Bandung, Indonesia

April 8, 2021 (Thursday) - Session: 10:00 am – 12:50 pm

Keynote Speakers

10:00 – 10:40 am, Thursday - Keynote XII
Dr.-Ing. Enzo Morosini Frazzon
Associate Professor, Industrial and Systems Engineering Department, Federal University of Santa Catarina (UFSC), Florianópolis – SC, Brazil
The Future of Production and Logistics Systems: the role of Industry and Academia

10:40 – 11:20 am, Thursday - Keynote XIII
Marco Santos, MBB, MBA
Master Black Belt, ZF do Brasil, Sorocaba, São Paulo, Brazil
Operational excellence: contribution of the lean six sigma experts

11:20 – 11:30 Break

11:30 – 12:10, Thursday - Keynote XIV
Mr. Fábio Soares Freccia
Head of Corporate Logistics Planning, Volkswagen do Brasil
São Bernardo do Campo, São Paulo, Brazil
12:10 – 12:50, Thursday - Keynote XV

Dr. Jose Luis Guerrero-Cusuman
Associate Professor of Operations and Information Management
McDonough School of Business, Georgetown University, Washington, D.C., USA

April 8, 2021 (Thursday) - Session: 1:00 – 2:45 pm

1:00 – 2:45, THURSDAY    Global Engineering Education VI   Room 1
Session Chair: Hernan Nina, Universidad Nacional de San Antonio Abad del Cusco, Cusco, Peru

1:00 – 1:20 (Thursday) – Room 1
Professor Randal Victor Gibbin
Founder at Crítério Lógico Inteligência Empresarial & Consultoria
Postgraduate Professor – Facens University
Sorocaba, São Paulo, Brazil
Gaming on academic and organizational education environments, the experience of Design Thinking Day – DTDay

1:20 – 1:40 (Thursday) – Room 1
Dr. Alessandro Augusto Jordao
Professor e Coordenador do Curso de Engenharia de Produção e Engenharia – Ciclo Básico
Universidade Paulista
Sorocaba, SP, Brazil

1:40 – 2:00 (Thursday) – Room 1
Dr. Sam da Silva Devincenzi
Professor de Engenharia de Software
Universidade Federal do Pampa
UNIPAMPA – Campus Alegrete
Alegrete, RS, Brasil

2:00 – 2:20 (Thursday) – Room 1
Hernan Nina
Professor of Computer and System Engineering
Carrera Profesional de Ingeniería Informática y de Sistemas
Universidad Nacional de San Antonio Abad del Cusco
Cusco, Perú
ID 495 Digital Media for Internal Communication within Higher Education

2:20 – 2:40 (Thursday) – Room 1
ID 503 Modernization of Undergraduate Education Program (PMG)
Ricardo Alexandre Diogo, Adjunct Professor of Mechatronics Engineering and Control & Automation Engineering
Eduardo de Freitas Rocha Loures, Full Professor at Industrial and Systems Engineering Graduate Program, Polytechnic School, Pontifical Catholic University of Parana, Curitiba, Parana, Brazil
Neri dos Santos, Senior Professor of Knowledge Management, Graduate Program in Knowledge Engineering and Management, Federal University of Santa Catarina, Florianopolis, Santa Catarina, Brazil

1:00 – 2:45, THURSDAY    Technical Session     Room 2
Session Chair: Eren Ozgen, Florida State University, Panama City, Florida, USA

ID 804 Flexibility and Operational Performance: Examining the Mediating Role of Lean and Sustainability Practices
Joelle Nader, School of Engineering, Office of the Graduate Studies and Research, Lebanese American University, Byblos 48328, Lebanon
Raed El-Khalil, Information Technology and Operations Management, Lebanese American University, Chouran Beirut: 1102 2801, Lebanon

ID 807 Digital Learning Tools and Opportunity Recognition in Entrepreneurship Education: A Theoretical Approach
Eren Ozgen, College of Business , Florida State University, Panama City, Florida 32405-1099 USA

ID 809 Towards the Development of Internet Tracker Mobile Application Based on User’s Preferences
Aquino, Jan Erica D.C., Batto, Karlo Gabriel, De Jesus IV, Bonifacio, Geldof Resuello; Grace Lorraine Intal, School of Information and Technology, Mapua University

1:00 – 2:45, THURSDAY    Information Systems     Room 3

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**PARALLEL SESSIONS**

**1:00 – 2:45, THURSDAY**

**Logistics and Transportation**

*Room 4*

**Session Chair:** Stefan Voß, Hamburg University, Information System Institute, Hamburg, Germany

- **ID 033** A Mixed Integer Linear Programming Model for Simultaneous Assortment Planning, Space Assignment and Shelf Location
  - Carlos Rodrigo Ruiz-Cruz, Centro de Estudios de Optimización, Escuela Colombiana de Ingeniería Julio Garavito, Bogotá D.C., Colombia
  - Nicolás Felipe Palacios-Villarraga, Maestría en Ingeniería Industrial, Escuela Colombiana de Ingeniería Julio Garavito, Bogotá D.C., Colombia

**ID 034** Operational Excellence Proposal Model on Logistics Management: A Case Study in an Automotive Industry
  - Anderson J. Silva, Claudemir L. Tramarico, and Fernando A. S. Marins, Sao Paulo State University (UNESP), Engineering School, Campus Guaratinguetá, Guaratinguetá, SP, 12516-410, Brazil

**ID 264** Perspectives of circular value networks in Ecuador
  - Ana Julia Acevedo Urquiaga, Industrial Engineering Program, University Foundation San Mateo, Bogotá, Colombia
  - Neyse Sablón Cossio, Postgraduate Institute, Production and Services Group (ProServ), Technical University of Manabi, Portoviejo, Ecuador
  - Marina Bouzon, Federal University of Santa Catarina, Florianópolis, Brazil
  - José Antonio Acevedo Suárez, Logistic and Production Management Laboratory (LOGESPRO), Havana Technological University “José Antonio Echevarría” (CUJAE), Havana, Cuba
  - Carlos Manuel Taboada Rodríguez, Logistics Performance Laboratory, Department of Production and System Engineering, University Federal of Santa Catarina, Florianópolis, Brazil

**ID 066** Urban Mobility App for Disabled People in the City of Sorocaba, Brazil
  - Adriana Moros-Daza and Rene Amaya-Mier and Guisselle Garcia-Llinas, Industrial Engineering Department, Universidad del Norte, Barranquilla, Colombia
  - Prof. Stefan Voß, Hamburg University, Information System Institute, Hamburg, Germany

**ID 384** Developing a framework and guidelines for successful CRM & Marketing Automation implementation for a small-to-medium size company with limited resources
  - Richard Truncale Florida Polytechnic University Masters of Innovation and Technology Graduate Student | Inbound & CRM Manager

**ID 591** Configuration of the Product as a Service strategy within the framework of Circular Economy, in the Furniture Sector of Higher Education Institutions
  - Brigitte Mildred Roldán Ramírez, Pablo Maya Duque and Olga Úsuga Manco, Department of Industrial Engineering, University of Antioquia, Medellín, Antioquia, Colombia

**1:00 – 2:45, THURSDAY**

**Design and Analysis**

*Room 5*

**Session Chair:** Sergio Aliaga, Universidad de Concepción, Concepción 4070409, Chile

- **ID 754** Factors that Influence the Intention to Use Food Delivery Applications in Times of Pandemic: A Study Using Structural Equations
  - Vinícius de Moura Dayrell and Ari Mariano-Melo, Department of Production Engineering, University of Brasilia, Brasilia, CEP 70910-900, Brazil
  - Patricio Ramírez-Correa, School of Engineering, Catholic University of the North, Coquimbo, 1781421, Chile
  - Maira Roche Santos and Marília Miranda Forte Gomes, CEAM - Center for Advanced Multidisciplinary Studies, University of Brasilia, Brasilia, CEP 70910-900, Brazil

- **ID 738** Design and Simulation of a Lamella Clarifier
ID 739  Review of Clarifier Technologies
P. Maqina, D.V.V. Kallon and B. N. Mushwana, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa

ID 801  Analysis of the Effects of the Prolonged Standing and Sitting Posture on Physiological Indicators, and the Potential Impact on Health: A Systematic Review and Meta-Analysis
Mateo Maldonado and Nicolás Orbe, Department of Industrial Engineering, Universidad San Francisco de Quito, Cumbayá, UIO 170901, ECU

ID 803  Towards Understanding the Impact of Industry 4.0 Technologies on Operational Performance: An Empirical Investigation in the US Automotive Industry
Joelle Nader, School of Engineering, Office of the Graduate Studies and Research, Lebanese American University, Byblos 48328, Lebanon
Mohamad Ali Mezher and Raed El-Khalil, Information Technology and Operations Management, Lebanese American University, Chouran Beirut, Lebanon

ID 793  A reverse logistics network for recycling in Chile: a case in Concepción
Sergio Aliaga, Lorena Pradenas and Carlos Contreras-Bolton, Departamento de Ingeniería Industrial, Universidad de Concepción, Concepción 4070409, Chile

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April 8, 2021 (Thursday) - Session: 3:00 – 4:45 pm

3:00 – 4:45, THURSDAY Industry 4.0 / Industry Solutions V Room 1

Session Chair: Alexander Tostes, Head of I 4.0/Capital Asset Optimization Senior Manager, Deloitte, São Paulo, Brazil

3:00 – 3:20 (Thursday) – Room 1

Daniel Luiz de Mattos Nascimento
BIM and Lean 4.0 Coordinator
CERTI Foundation
Florianópolis, Santa Catarina, Brazil

3:20 – 3:40 (Thursday) – Room 1

Marco Baptista
Americas MOM Channel Leader
Siemens Digital Industries Software
Vitória, Espírito Santo, Brazil

3:40 – 4:00 (Thursday) – Room 1

Jorge D.B. Chagas
Data Scientist
IBM
Campinas, São Paulo, Brazil

4:00 – 4:20 (Thursday) – Room 1

Marcelo Suzuki
Business Development Specialist (Global Meat Market)
Siemens
São Paulo, Brazil

4:20 – 4:40 (Thursday) – Room 1

Alexander Tostes
Head of I 4.0/Capital Asset Optimization Senior Manager
Deloitte
São Paulo, Brazil

4:40 – 5:00 (Thursday) – Room 1

Carlos Tunes
PARALLEL SESSIONS

3:00 – 4:45, THURSDAY  Global Engineering Education  Room 2

Session Chair: Dr. Jesus Francisco Vargas Bonilla, Dean, School of Engineering, University of Antioquia, Medellín, Colombia

3:00 – 3:45 (Thursday, April 8) – Room 2

Dr. Ramiro Jordan
Associate Dean of Engineering, Global Initiatives
University of New Mexico
Albuquerque, New Mexico
Past President IFEES: 2018-2020

3:45 – 4:15 (Thursday, April 8) – Room 2

Dr. Jesus Francisco Vargas Bonilla
Dean, School of Engineering
University of Antioquia
Medellín, Colombia

4:15 – 5:00 (Thursday, April 8) – Room 2

Dr. David E. Goldberg
President and Head Coach
ThreeJoy Associates, Inc.—Transforming Engineering Education
Douglas, Michigan, United States
Jerry S. Dobrovolny Distinguished Professor Emeritus, University of Illinois at Urbana-Champaign

3:00 – 4:45, THURSDAY  Quality Control and Reliability  Room 3

Session Chair: Yousaf Ayub, Consultant Quality Management System.9000 FF9, Leeds Center, Gulberg Lahore, 54000, Pakistan

ID 030  Assessment of the Effectiveness of Treatment Methods on Eucalyptus Grandis Yielding Pencil Props
Lubisi Silence and Telukdarie Arnesh, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

ID 167  Benefits of Implementing Quality Management Systems in Exploration Drilling Operations - Global Perspectives
Sambil Charles Mukwakungu and Refilwe Dipholo, Department of Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa

ID 407  Non-Conformities against ISO/IEC 17025 in Pakistani labs: A study based on Accreditation Body Reports
Yousaf Ayub, Consultant, Quality Management System.9000, FF9, Leeds Center, Gulberg Lahore, 54000, Pakistan
Zahid Abbas Shah, Institute of Quality and Technology Management, University of the Punjab, Lahore, 54000, Pakistan
Zahid Anwar, Department of Industrial Engineering, Tsinghua University, Haidian District, Beijing, 100084, P.R. China
Muhammad Imran, Department of Chemical Engineering, University of the Punjab, Lahore, 54000, Pakistan

ID 138  Predictive Maintenance Model Based on Fusion of Time Series and Supervised Learning Methods
Chao-Lung Yang Chin-Husuan Liang, and Cheng-Jhe Lin, Department of Industrial Management, National Taiwan University of Science and Technology, Taipei, 106, Taiwan

ID 233  Real Time Management for Passenger Train Scheduling: A Case Study in South Africa
Junior Mabiza, Charles Mbohwa, and Mbali Myeni, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg, Auckland Park, Johannesburg, 2092, South Africa

ID 371  Critical Success Factors in Management of University-Industry Cooperation Projects: A Case Study in Aerospace and Defense Industry
Marcel Senaubar Alves and Eduardo Bizeli Tiburtino, PhD student in Technology and Innovation Management, Department of Production, Engineering - Federal University of São Carlos, São Carlos – SP, Brazil
Ana Lúcia Vitale Tokomian, PhD Professor in the Department of Production Engineering, Federal University of São Carlos, São Carlos – SP, Brazil

ID 486  ISO/IEC 17025:2017 Lab Management System Effectiveness Verification by Using Quantitative Approach
Yousaf Ayub*, 1Consultant Quality Management System.9000 FF9, Leeds Center, Gulberg Lahore, 54000, Pakistan
Zahid Abbas Shah 2Institute of Quality and Technology Management University of the Punjab Lahore, 54000, Pakistan
Zahid Anwar 3Department of Industrial Engineering Tsinghua University Haidian District, Beijing, 100084, P.R. China

3:00 – 4:45, THURSDAY  Al and IoT  Room 4

Session Chair: Bruno Gonçalves Duarte, Tecnólogo do Curso Superior em Tecnologia da Gestão da Tecnologia da Informação, São Paulo, Brazil

ID 381  Socioeconomics Factors of Average National Exam Score (NEM) of Senior Secondary School (SMTA) in Indonesia
ID 032  Digital Technologies and Artificial Intelligence for Optimized Key Performance Indicators
Mike Sishi and Amesh Telukdarie, Department of Engineering Management, University of Johannesburg, 524 Auckland Park, 2006, South Africa

ID 225  Environmental Analytics of Wild Life in Cross Rivers State, Nigeria: An Inception V3, Imagery Machine learning Approach
Owoeye Oluwatobi Michael, Software Developer/Principal Investigator, Handsolabs Software Academy
Edim Bassey Edim, Department of Computer Science, Faculty of Science, University of Calabar, Cross Rivers State, Nigeria.

ID 226  Exploring Algorithms for Malware Classification
Edim Bassey Edim, Department of Computer Science, Faculty of Science, University of Calabar, Cross Rivers State, Nigeria
Owoeye Oluwatobi Michael, Software Developer/Principal Investigator, Handsolabs Software Academy

ID 070  BOEING 737’ MAX: An analysis of the variables involved in aircraft failure
William Soares de Lima, Federal Institute of Science and Technology of São Paulo – Campus Boituva
Marcelo Figueiredo Polido, Federal Institute of Science and Technology of São Paulo – Campus Boituva, Brazil

ID 394  Impactos da Implantação de um Sistema ERP em uma Microempresa do Ramo de Alimentação
Bruno Gonçalves Duarte, Tecnólogo do Curso Superior em Tecnologia da Gestão da Tecnologia da Informação, São Paulo, Brasil
Patricia Glauco Moreno, Professora Mestre do Curso Superior em Tecnologia da Gestão da Tecnologia da Informação, São Paulo, Brasil

ID 511  Agent-based Model: Environmental Awareness and Circular Economy in Developing Countries
Jesus D. Galacico-Noguera, Pablo A. Maya, Gloria Lucia Ramirez-Cordoba, and Yony Fernando Ceballos, Industrial Engineering Department, Universidad de Antioquia, Medellin, Colombia

3:00 – 4:45, THURSDAY  Operations Management  Room 5
Session Chair: Hisham Alkhalefah, Advanced Manufacturing Institute, King Saud University, Riyadh 11421, Saudi Arabia

ID 914  The Effect of Work Productivity Toward Employee Performance
Maudip Hjiqatin, M. Yahya Arwiyah, Mahendra Fakhri, and Bachruddin Saleh Luturlean, School of Communication and Business Telkom University, Indonesia

ID 126  Operations Strategy Framework Update
José Roberto Soares Ribeiro, Federal University of São Carlos (PhD), São Carlos-SP-Brazil / Methodist University of Piracicaba (Professor) - Piracicaba-SP-Brazil

ID 913  Development of an Efficient Optimization Model Production Line with Rework Path
Hisham Alkhalefah, Usama Umer, and Mustufa Haider Abidi, Advanced Manufacturing Institute, King Saud University, Riyadh 11421, Saudi Arabia
Ahmed Elkaseer, Department of Production Engineering and Mechanical Design, Faculty of Engineering, Port Said University, Port Fuad 42526, Egypt and Institute for Automation and Applied Informatics, Karlsruhe Institute of Technology, 76344 Karlsruhe, Germany

ID 037  Strategic Decision Making in the Management of the Sustainable Supply Chain
Edgar Guillermo Rodriguez Guevara and Diego Alonso Garcia Bonilla, Department of Administration and Organizations, Faculty of Administration Sciences Universidad del Valle, Cali, Colombia

Diversity and Inclusion Plenary Panel
Sponsored by Ford Motor Company
5:00 - 6:30 pm (Thursday), April 8, 2021

Panel Chair
Dr. Jose Luis Guerrero-Cusmano
Associate Professor of Operations and Information Management
McDonough School of Business
Georgetown University
Washington, D.C., USA

Panel Speaker I
Professor Tonya L. Smith-Jackson
Senior Vice-Provost for Academic Affairs
NC A&T State University
Greensboro, North Carolina, USA

Panel Speaker II
Ms. Aryanne Quintal
Panel Speaker III

Prof. Maria Jesus Saenz, PhD
Executive Director, MIT SCM Blended Master Program
Director, MIT Digital Supply Chain Transformation
Massachusetts Institute of Technology, Center for Transportation & Logistics
Cambridge, Massachusetts, USA

Panel Speaker IV

Dr. Soyica Diggs Colbert
Interim Dean of Georgetown College & Idol Family Professor
Professor of African American Studies and Performing Arts
Georgetown University
Washington, DC 20057, USA

Panel Speaker V

Panel Speaker VI

April 8, 2021 (Thursday) - Session: 7:00 – 9:00 pm

Conference Awards Ceremony
Brasileiras (31):

Centro Federal de Educação Tecnológica de Minas Gerais (CEFET-MG)
Centro Federal de Educação Tecnológica do Rio de Janeiro (CEFET-RJ)
Centro Universitário Anhanguera
Centro Universitário Anhanguera de Niterói
Centro Universitário FEI
Centro Universitário Moura Lacerda
Centro Universitário para o Desenvolvimento do Alto Vale do Itajaí (UNIDAVI)
Escola Superior de Engenharia e Gestão (ESEG)
FACENS University
Instituto Brasileiro de Informação em Ciência e Tecnologia (IBICT)
Instituto Federal do Espírito Santo (IFES)
Instituto Federal do Rio de Janeiro (IFRJ)
Instituto Federal de São Paulo (IFSP)
Pontifícia Universidade Católica do Paraná (PUC-PR)
Universidade Aberta do Brasil (UAB)
Universidade de Brasília (UNB)
Universidade de Santa Cruz do Sul (UNISC)
Universidade de São Paulo (USP)
Universidade do Estado do Rio de Janeiro (UNESP)
Universidade do Estado do Rio de Janeiro (UNERJ)
Universidade do Vale do Itajaí
Universidade Estácio de Sá (UNESA)
Universidade Federal ABC (UFABC)
Universidade Federal de Santa Catarina (UFSC)
Universidade Federal de Sao Carlos (UFScar)
Universidade Federal do Rio Grande do Sul (UFRGS)
Universidade Federal Fluminense (UFF)
Universidade Metodista de Piracicaba (UNIMEP)
Universidade Paulista (UNIP)
Universidade Presbiteriana Mackenzie
Universidade Tecnológica Federal do Paraná (UTFPR)

Estrangeiras (93):

Balochistan University of Engineering and Technology, Khuzdar
Bosque University
Chalmers University
Central Connecticut State University
College of Mechanical Engineering Technology
Corporación Universitaria Minuto de Dios
CSIR
Department of Industrial Engineering, Tsinghua University
Department of Industrial Management, University of Kelaniya, Sri Lanka
Durban University of Technology
Ean University
Escuela Colombiana de Ingeniería
Ewha Womans University
Faculdade de Engenharia da Universidade do Porto
Faculty of Sciences & Techniques of Marrakesh, Cadi Ayyad University
Foundation University Islamabad, Pakistan
Fundación Universitaria San Mateo
Handsonlabs Software Academy
Icesi University
IESEG School of Management (LEM-CNRS)
Indiana State University
INPI
Integra S.A.
IPN
Kaizen Institute Western Europe
King Saud University
LTU
Mehran UET, Jamshoro, Sindh, Pakistan.
Military Institute of Science and Technology
MUT
Narotama University
National Taiwan University of Science and Technology
National University of Computer and Emerging Sciences (NUCES), FAST Lahore Pakistan
National University of La Matanza. Departamento de Ingeniería e Investigaciones Tecnológicas
Personal Quality Management System.9000
San Jose State University
Siemens Ltda
Sudan University of Science & Technology
Termomecanica São Paulo S.A.
Textile Engineering Department, Master Program in Textile Engineering
Thapar Institute of Engineering and Technology, Adarsh Nagar, Prem Nagar, Patiala, Punjab State, India. PIN Code- 147004
The University Of the District OF Columbia UJ
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Universidad Andrés Bello
Universidad Austral de Chile
Universidad Catolica del Norte
Universidad Central
Universidad Cesar Vallejo S.A.C
Universidad cooperativa de colombia
Universidad de Deusto
Universidad de la Costa
Universidad de La Salle
Universidad de Los Andes
Universidad del Norte
Universidad del Valle
Universidad EAN
Universidad El Bosque
Universidad Icesi
Universidad Industrial de Santander (UIS)
Universidad Libre Seccional Pereira
Universidad Militar Nueva Granada
Universidad Nacional de Colombia
Universidad Nacional de Hurlingham
Universidad Nacional de Hurlingham. Instituto de Educación.
Universidad Nacional de Hurlingham. Instituto de Tecnología e Ingeniería
Universidad Nacional de La Matanza
Universidad Privada del Norte
Universidad Santiago de Cali
Universidad Tecnica de Manabí
Universidad Tecnológica de Pereira
Universidade de Aveiro
Universidade do Minho - Campus de Gualtar em Braga - Portugal
Universitas Bhayangkara Surabaya
University Mohammed First Oujda
University of Aveiro
University of Aveiro / Center for Research in Higher Education Policies
University of Calabar
University of Derby
University of Hamburg
University of Johannesburg
University of Kelaniya
University of Michigan - Dearborn
University of Minho
University of Minho- Algoritmi Centre
University of the Basque Country
University of Windsor
Western Michigan University
CATME Provides Instructor Tools for:

- Assigning students to better functioning teams using Team-Maker surveys
- Training students to work in teams through Teamwork Training Tools
- Identifying teams having teamwork difficulties
- Training students to rate teamwork behaviors using Peer Evaluation and Rater Practice surveys

Form and Manage Student Teams Online

For more information, go to info.catme.org
IEOM First Symposium on “Application-based Industrial Engineering Education”
Date: 4 August, 2018; Venue: Jessore University of Science and Technology (JUST), Bangladesh
Organized by JUST and IEOM Society of Bangladesh
Theme: Present scenario of IE Education in Response to Global Environment and Contribution of IE to Industrial Development in Bangladesh

IEOM Brazil 2018 Visit
IEOM Team has visited Production Engineering Department of Polytechnic School, University of Sao Paulo (USP), Brazil on June 25, 2018. Photos from left - Prof. Dr. Renato de Oliveira Moraes, Prof. Marcelo Schneck de Paula Pessoa (Deputy Department Head), Professor Don Reimer, Prof. Fernando José Barbin Laurindo (Department Head), Prof. Mauro de Mesquita Spinola, Dr. Ahad Ali, and Prof. Vitor Caldana (IFSP – Sorocaba).

IEOM team visited Department of Production Engineering at University of São Paulo – Sao Carlos (USP-SC), SP, Brazil: Prof. Reginaldo T. Coelho (Nucleus of Advanced Manufacturing, Institute Factory of Millennium), Prof. Vitor Caldana (IFSP – Sorocaba), Professor Don Reimer, Professor Eraldo Jannone da Silva (Nucleus of Advanced Manufacturing, Institute Factory of Millennium), and Prof. Aldo Roberto Ometto Coordinator of Post Graduate Program of Production Engineering at EESC-USP)
IEOM team visited Department of Production Engineering at Federal University of Sao Carlos (UFSCar), SP, Brazil: Dr. Ahad Ali, Prof. Dr. Roberto Antonio Martins, Professor Rosane L. Chicarele Alcantara, Professor Hildo Meireles de Souza Filho (Head of Production Engineering), Professor Don Reimer and Prof. Vitor Caldana (IFSP – Sorocaba).

IEOM team visited FACEEN University, Sorocaba, SP, Brazil on July 3, 2018. Photo includes Eng. Paulo Roberto Freitas de Carvalho Facens (Director), faculty and students.

IEOM team visited Universidade Presbiteriana Mackenzie Campinas, SP, Brazil: Prof. João Carlos Gabriel - Coordinator of the Civil Engineering at the Center for Science and Technology - CCT – Mackenzie (far left) and Prof. Luiz Vicente Figueira de Mello Filho - Coordinator of the Production Engineering Course at Mackenzie Presbyterian University (far right).

IEOM team visited IFSP of Sorocaba campus, SP, Brazil on June 29, 2018. Photos include Ms. Cynthia Fisher (International Relations Advisor of The Federal Institute of Education, Science and Technology, Sao Paulo) and Dr. Denílson C. Mirim (Director – IFSP – Sorocaba).

IEOM Global Engineering Education Symposium Speakers at Instituto Federal de São Paulo – Campus Sorocaba, SP, Brazil: Dr. Ahad Ali (USA), Professor Donald M. Reimer (USA), Prof. Vitor M. Caldana (IFSP – Instituto Federal de São Paulo), Dr. Marcia Tera da Silva (Paulista University – UNIP) and Profa. MSc. Eliane Regina Rodrigues Message (ZorfaTec, SP, Brazil). Symposium Chair – Prof. Vitor M. Caldana.

IEOM visited University of Sorocaba (UNISO), Sao Paulo, Brazil on July 2, 2018. Photo includes Mr. Osmar Renato de Barros Siqueira (center), Head of the International Office, Universidade de Sorocaba – Uniso.
IEOM Bangladesh Workshop
Lean Six Sigma Workshop at Comfit Composit Knit Ltd, Gorail, Tangail, Bangladesh, August 1, 2018

IEOM BUET Visit
In front of IPE Department, BUET on August 14, 2018 after IEOM Presentation to Faculty and Students. With VC of BUET, showing IEOM activities on August 14, 2018

IEOM University of Monterrey (UDEM), Mexico Visit, May 29-30, 2018
First GCC Conference in Riyadh, Saudi Arabia, November 26-28, 2019

4th North American IEOM Conference, October 23-25, 2019
 Faculty of Civil and Industrial Engineering of Sapienza – University of Rome, Italy
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# IEOM Executive Committee

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<th>Director of Membership and Chapter</th>
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<tr>
<td>Professor Donald M. Reimer</td>
<td>Dr. Mohammad Khadem</td>
<td>Dr. Mohammad Anwar Rahman</td>
<td>Dr. Ahad Ali</td>
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<td>President, Small Business Strategy Group, Detroit, Michigan, USA</td>
<td>Associate Professor and Department of Mechanical and Industrial Engineering, Sultan Qaboos University, Muscat, Oman</td>
<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>
<td>Associate Professor and Director of Membership and Chapter, IEOM Society International, Southfield, Michigan, USA</td>
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<td>Dr. Saso Krstovski</td>
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<td>Dr. Hayder Zghair</td>
<td>Dr. Ir. Lina Gozali</td>
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<td>Lean Manufacturing Coach/Six Sigma Master Black Belt, Van Dyke Transmission Plant Ford Motor Company, Michigan, USA</td>
<td>Associate Professor and Director, Bachelor of Science in Engineering Technology Management, Department of Mechanical Engineering, Saginaw Valley State University, Michigan, USA</td>
<td>Assistant Teaching Professor of Industrial and Manufacturing Engineering, Pennsylvania State University, The college: Penn State Berk, PA, USA</td>
<td>Lecturer Industrial Engineering Department Tarumanagara University (UNTAR), Jakarta, Indonesia</td>
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<tr>
<th>Operations Manager</th>
<th>Director of Web Development</th>
<th>Director of Certification</th>
<th>Assistant Program Director</th>
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<tr>
<td>Dr. Taufiq Islam</td>
<td>Suvro Sudip</td>
<td>Dr. Joseph M. Ogundu</td>
<td>Ms. Rocksana Ahmed</td>
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<tr>
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<td>President/CEO, Emerald Global Consulting Inc., West Bloomfield, Michigan</td>
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</tbody>
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Upcoming Events

**4th EU International Conference on Industrial Engineering & Operations Management**
Rome, Italy, August 3-5, 2021
Venue: Sapienza – University of Rome
Conference Website: [www.ieomsociety.org/rome2020/](http://www.ieomsociety.org/rome2020/)

**1st Indian International Conference on Industrial Engineering and Operations Management**
August 16-18, 2021, Bangalore, India
Host: Amrita University, Bangalore
Conference Website: [http://ieomsociety.org/india2021](http://www.ieomsociety.org/india2021)

**1st Asia Pacific Conference on Industrial Engineering and Operations Management**
Sept. 14-16, 2021, Surakarta, Indonesia
Host: Sebelas Maret University (UNS)
Conference Website: [http://ieomsociety.org/indonesia2021](http://www.ieomsociety.org/indonesia2021)

**6th North American Conference on Industrial Engineering & Operations Management**
Monterrey, Mexico, November 3-5, 2021
Venue: CINTERMEX-Monterrey Convention Center
Conference Website: [www.ieomsociety.org/monterrey2020/](http://www.ieomsociety.org/monterrey2020/)

**12th Annual IEOM Conference**
Istanbul, Turkey, March 8-10, 2022
Venue: Kadir Has University
Conference Website: [www.ieomsociety.org/istanbul2022/](http://www.ieomsociety.org/istanbul2022/)

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