# **Overall Conference Program**

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March 7, 2016 (Monday)
13:00 - 21:00 Registration
08:00 - 16:30 Lean Six Sigma Green Belt Certification Workshop
March 8, 2016 (Tuesday)
07:00 - 17:00 Registration
08:00 - 16:30 Lean Six Sigma Green Belt Certification Workshop
08:00 - 09:15 Parallel Sessions
09:15 - 09:30 Break
09:30 - 10:00 Welcome Address: Professor Datuk Dr. Mohd, Noh bin Dalimin, VC, Universiti Tun Hussein Onn Malaysia
10:00 – 11:00 Opening Keynote: Dr. Ronald G. Askin, Arizona State University, Tempe, AZ, USA
11:00 - 11:30 Networking Break - Exhibition Hall
11:30 - 12:45 Parallel Sessions
12:45 - 13:00 Break
13:00 - 14:00 Industry Keynote: Dr. Anwar Ali Mohamed, O.R. Freelance Consultant & Former Principal Engineer at
             Intel Malaysia (Boxed Lunch Provided)
14:00 - 14:30 Networking Break - Exhibition Hall
14:30 - 15:45 Parallel Sessions
15:45 - 16:00 Break
16:00 - 17:15 Parallel Sessions
17:15 - 17:30 Break
17:30 – 19:00 Poster Session and Student Chapter Mixer – Exhibition Hall
March 9, 2016 (Wednesday)
07:00 - 17:00 Registration
08:00 - 09:15 Parallel Sessions
09:15 - 09:30 Break
09:30 – 10:15 Morning Keynote: Ir. Dr. Zuhairi Abd. Hamid, Executive Director, Construction Research Institute of Malaysia
10:15 - 11:00 Morning Keynote: Speaker from PROTON Automobile - Malaysia
11:00 - 11:30 Networking Break - Exhibition Hall
11:30 - 12:45 Parallel Sessions
12:45 - 13:00 Break
13:00 - 14:00 Lunch Keynote: Dr. Rupy Sawhney, University of Tennessee, Knoxville, USA (Boxed Lunch Provided)
14:00 - 14:30 Networking Break - Exhibition Hall
14:30 - 15:45 Parallel Sessions
15:45 - 16:00 Break
16:00 - 17:15 Parallel Sessions
17:15 - 19:00 Break
19:00 - 22:00 CONFERENCE AWARD DINNER and Cultural Program by Cultural Academy of Kuala Lumpur
Award Keynote: Hulas King, Director, Diversity, Professional Affiliations & Global Community Relations, Siemens PLM
March 10, 2016 (Thursday)
07:00 - 17:00 Registration
08:00 – 16:30 Smart Manufacturing Workshop
08:00 - 09:15 Parallel Sessions
09:15 - 09:30 Break
09:30 - 10:15 Morning Keynote: Dr. Hans-Juergen Hoyer, Secretary General of the International Federation for Engineering
              Education Societies (IFEES), Executive Secretary of the Global Engineering Deans Council (GEDC)
10:15 - 11:00: Morning Keynote: Prof. Dr. Noraini Kaprawi, Director of Strategic and Quality Management Office, Faculty of
                                 Technical and Vocational Education, University of Tun Hussein Onn Malaysia
11:00 - 11:30 Networking Break - Exhibition Hall
11:30 - 12:45 Parallel Sessions
12:45 - 13:00 Break
13:00 - 14:00 Lunch Keynote: Rajiv Ghatikar, VP & General Manager, Siemens PLM, ASEAN/Australasia (Boxed Lunch Provided)
14:00 – 14:30 Networking Break - Exhibition Hall
14:00 – 20:00 Entrepreneurship Workshop
14:30 - 15:45 Parallel Sessions
15:45 - 16:00 Break
16:00 - 17:15 Parallel Sessions
17:15 - 17:30 Break
17:15 - 18:00 CLOSING MIXTURE - Exhibition Hall
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# **Organizer**



# **Tentative Program - IEOM 2016 Kuala Lumpur**

### March 7, 2016 (Monday)

13:00 – 21:00 Registration

08:00 – 16:30 Lean Six Sigma Green Belt Workshop

# March 8, 2016 (Tuesday)

	ivial cit 0, 2010 (Tuesday)												
	Starhill 4	Starhill 5	Starhill 6	Starhill 7	Starhill 8	Bintang V	Bintang VI	Bintang VII	Mayang Sari I	Mayang Sari II	Mayang Sari III	Mayang Sari IV	
08:00	Global	Industry	Lean 6σ	OM I	SCM I	Material Flow	UG Student	<b>Grad Student</b>	Occupational	Data	Case Studies	Reliability and	
	Engineering	Solutions	<b>Green Belt</b>			Cost	Paper	Paper	Safety and	Analytics		Maintenance	
	Education		Workshop			Accounting	Competition	Competition	Health (OSH)				
09:30	Welcome Address: Professor Datuk Dr. Mohd. Noh bin Dalimin, Vice-Chancellor, Universiti Tun Hussein Onn Malaysia (UTI											sia (UTHM)	
10:00	Opening Keynote: Dr. Ronald G. Askin, Professor and Director, School of Computing, Informatics, and Decision Systems Engineering												
	Arizona State University, Tempe, AZ, USA - Mayang Sari Grand Ballroom												
11:00	Networking Break at Exhibition Hall												
11:30	Global	Industry	Lean 6σ	OM II	SCM II	Material Flow	UG Student	Grad Student	Human	Data	Case Studies	Transportation	
	Engineering	Solutions	<b>Green Belt</b>			Cost	Paper	Paper	Factors and	Analytics		and Traffic	
	Education		Workshop			Accounting	Competition	Competition	Ergonomics				
13:00	Industry Keynote: Dr. Anwar Ali Mohamed, O.R. Freelance Consultant, Penang, Malaysia and Former Principal Engineer at Intel												
	Malaysia (Boxed Lunches Provided) - Mayang Sari Grand Ballroom												
14:00						Networking B	reak at Exhibiti	on Hall					
14:30	Global	Industry	Lean 6σ	OM III	SCM II	Manufacturing	UG Student	Doctoral	Human	Data	Construction	Transportation	
	Engineering	Solutions	<b>Green Belt</b>			and Design	Paper	Dissertation	Factors and	Analytics	Management	and Traffic	
	Education		Workshop				Competition	Competition	Ergonomics				
15:45						Networking B	reak at Exhibiti	on Hall					
16:00	Global	Big Data in	Lean 6σ	OM IV	SCM IV	Manufacturing	Case Studies	Doctoral	Human	Decision	Engineering	Technology	
	Engineering		<b>Green Belt</b>			and Design		Dissertation	Factors and	Sciences	Management	Management	
	Education	4:00-7:00pm	Workshop					Competition	Ergonomics				
17:15	Poster Session and Student Chapter Mixer												

### March 9, 2016 (Wednesday)

	Starhill 4	Starhill 5	Starhill 6	Starhill 7	Starhill 8	Bintang V	Bintang VI	Bintang VII	Mayang Sari I	Mayang Sari II	Mayang Sari III	Mayang Sari IV
08:00	Global	Industry		Lean and	SCM V	Manufacturing	Undergraduate	Reliability	Human	Decision	Engineering	Energy
	Engineering	Solutions		Six		and Design	Research	and	Factors and	Analysis	Management	
	Education			Sigma I			Presentation	Maintenance	Ergonomics			
09:30	09:30 Wednesday Morning Keynote: Ir. Dr. Zuhairi Abd. Hamid, Executive Director, Construction Research Institute of Malaysia											
	(CREAM) - Mayang Sari Grand Ballroom											
10:15	Wednesday Morning Keynote: Speaker from PROTON Automobile - Malaysia											
11:00	Networking Break at Exhibition Hall											

**Tentative Program - IEOM 2016 Kuala Lumpur** 

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11:30	Global	Industry	OR I	Lean and	SCM VI	Manufacturing	High School	Reliability	Production	eBusiness &	Facility	Energy
	Engineering	Solutions		Six		and Design	STEM Project	and	Planning	eCommerce	Planning	
	Education			Sigma II			Presentation	Maintenance				
13:00	Wednesday Lunch Keynote: Dr. Rupy Sawhney, Heath Fellow in Business and Engineering, Professor, Industrial and Systems											/stems
	Engineering, University of Tennessee, Knoxville, USA (Boxed Lunches Provided) - Mayang Sari Grand Ballroom											
14:00	Networking Break at Exhibition Hall											
14:30	Global	Industry	OR II	Lean and	SCM VII	Automation and	Engineering	Healthcare	Production	Information	Financial	Sustainability
	Engineering	Solutions		Six Sigma		Control	Education	Systems	Planning	Technology	Engineering	and Green
	Education			Ш								Systems
15:45						Networ	king Break at Exh	ibition Hall				
16:00	GEE:	Industry	OR III	Lean and	SCM VIII	Entrepreneurship	Engineering	Healthcare	Production	Undergraduate	Project	Sustainability
	Panel	Solutions		Six Sigma		and Innovation	Education	Systems	Planning	Research	Management	and Green
	Session			IV						Competition		Systems
19:00-	Co	nference	Award	Dinner a	nd Cultu	ral Program by	y Cultural Aca	demy of Kua	ala Lumpur	- Mayang Sa	ri Grand Ball	room
22:00												

March 10, 2016 (Thursday)

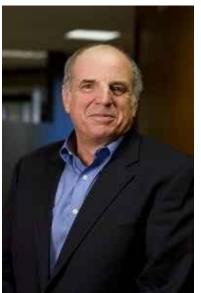
	Starhill 4	Starhill 5	Starhill 6	Starhill 7	Starhill 8	Bintang V	Bintang VI	Bintang VII	Mayang Sari I	Mayang Sari II	Mayang Sari III	Mayang Sari IV	
08:00	Global	Industry	Smart	Quality	Logistics	IE/OM in Asia	Artificial	Healthcare	Modeling	Reliability and	Project	Modeling	
	Engineering	Solutions	Manufacturing	Control			Intelligence	Systems	and	Maintenance	Manage-	and	
	Education		workshop						Simulation		ment	Simulation	
09:30	Thursday Morning Keynote: Dr. Hans-Juergen Hoyer, Secretary General of the International Federation for Engineering Education Society												
	(IFEES), Executive Secretary of the Global Engineering Deans Council (GEDC) and Resident Scholar at Marquette University, USA												
10:15	Thursday Morning Keynote: Prof. Dr. Noraini Kaprawi, Director of Strategic and Quality Management Office, Faculty of Technical and												
	Vocational Education, University of Tun Hussein Onn Malaysia - Mayang Sari Grand Ballroom												
11:00		Networking Break at Exhibition Hall											
11:30	Global	Industry	Smart	Quality	Logistics	Inventory	Artificial	Lean and Six	Case Studies	Sustainable	Service	Modeling	
	Engineering	Solutions	Manufacturing	Control		Management	Intelligence	Sigma		Manufacturing	Systems	and	
	Education		workshop									Simulation	
13:00		Thursda	<mark>ay Lunch Keyn</mark>					•		I, ASEAN/Aust	tralasia		
				(Box	ed Lunches Pr				om				
14:00		_				orking Break at E					_	T	
14:30	Global	Industry	Smart		Entrepreneurship	Sustainable	Computer	Systems	Engineering	Sustainability	Statistics &	Modeling	
	Engineering Education	Solutions	Manufacturing	and	Workshop:	Manufacturing		Engineering	Economy	and Green	Optimizati	and	
	Luucation		workshop	Maintenance	2:00 – 8:00 pm		computing			Systems	on	Simulation	
15:45			_			orking Break at E					1		
16:00	Global	Industry	Smart	Operations	Entrepreneurship	Case Studies	OPEN	OPEN	IFEES	IEOM Student	IEOM	IEOM	
	Engineering Education	Solutions	Manufacturing	Excellence	Workshop:				Meeting	Chapter Dev.	Chapter	Chapter	
4 = 4 =	Luucation		workshop		2:00 – 8:00 pm					Meeting	Meeting	Meeting	
17:15						Closing Mix	xer						

# Sixth International Conference on Industrial Engineering and Operations Management (IEOM)

JW Marriott Hotel Kuala Lumpur, Malaysia March 8 – 10, 2016

# **Keynote Speakers**

Opening Keynote (Tuesday, March 8, 2016): 10:00 – 11:00 am



Dr. Ronald G. Askin

Professor and Director School of Computing, Informatics, and Decision Systems Engineering Arizona State University Tempe, AZ, USA

Ronald G. Askin, Ph.D., is a Professor of Industrial Engineering and Director of the School of Computing, Informatics, and Decision Systems Engineering at Arizona State University. Dr. Askin received a B.S. in Industrial Engineering from Lehigh University and an M.S. in Operations Research and a PhD in Industrial and Systems Engineering from Georgia Institute of Technology. He has over 30 years of experience in the development, teaching and application of methods for systems design and analysis with particular emphasis on production and material flow systems. Dr. Askin is a Fellow of the Institute of Industrial Engineers (IIE) and Editor-in-Chief of IIE Transactions. He also serves on the INFORMS Board of Directors and has previously served on the IIE Board of Trustees, as President of the IIE Council of Fellows, Chair of the INFORMS Manufacturing and Service Operations Management Society, Chair of the Council of Industrial Engineering Academic Department Heads (CIEADH) and Chair of the Association of Chairs of Operations Research Departments (ACORD). Dr. Askin has published over 120 journal and conference papers and presented invited Keynote Addresses on four continents. His list of awards includes a National Science Foundation Presidential Young Investigator Award, the Shingo Prize for Excellence in Manufacturing Research, IIE Joint Publishers Book of the Year Award (twice), IIE

Transactions on Design and Manufacturing Best Paper Award (twice), the Eugene L. Grant best paper award from The Engineering Economist, and the IIE Transactions Development and Applications Award.

### Industry Keynote (Tuesday, March 8, 2016): 1:00 – 2:00 pm (Boxed Lunch Provided)



O.R. Freelance Consultant Penang, Malaysia

Former Principal Engineer at Intel Malaysia

Dr. Anwar Ali is a freelance trainer and consultant in Operations Research (OR). He has 27 years' experience in semiconductor industry, 2 years at Texas Instruments in Kuala Lumpur followed by 25 years at Intel Technology Sdn Bhd in Penang. He was a Principal Engineer for his last 5 years at Intel. He practiced OR (discrete event simulation and mathematical modelling) for 13 years. His areas of expertise include high fidelity equipment simulation modelling, factory capacity modelling and optimization, and the relevant enterprise data integration involved.

Previously, he held Industrial Engineering (IE) management positions supporting factory start-up and designing, developing and deploying enterprise systems for IE capacity planning. He was an

equipment development engineer for 7 years, developing IC logo machine vision inspection and PC-based equipment control during the days of 286/386. Dr. Anwar Ali completed his B.Eng. in Mechanical Engineering (Industrial Engineering major) from Universiti Teknologi Malaysia (UTM) in 1988, M.Sc. in Decision Science from Universiti Utara Malaysia (UUM) in 2005, and doctorate in Engineering Business Management from UTM in 2014.

### Wednesday Morning Keynote (March 9, 2016): 9:30 - 10:15 am



Ir. Dr. Zuhairi Abd. Hamid Executive Director Construction Research Institute of Malaysia (CREAM) Kuala Lumpur, Malaysia

Green, Sustainability and Lean Systems in Malaysia Construction Industry and Management

Zuhairi Abd. Hamid is the Executive Director of Construction Research Institute of Malaysia (CREAM), a research institute established under Construction Industry Development Board (CIDB) which he joined in January, 2006. He has over 27 years of experience in the construction industry and started his professional career as a civil and structural engineer with Public Works Department of Malaysia in 1984. He has worked under various capacities as road engineer, bridge engineer, building engineer, district engineer, assistant director of planning, forensic and structural design engineer. He joined CIDB in 1998 as a senior manager at the Technology Development Division and later was appointed to his current post at CREAM. He holds a B.Eng. (Hons.) Civil from

University Technology Malaysia. He gained his Masters in Structural Dynamic Engineering from Kanazawa University, Japan and his PhD in IT Construction majoring in Healthcare Facilities Management from University of Salford, United Kingdom. He is a Professional Engineer (P.Eng.) in the Board of Engineers Malaysia and a Fellow of the Institution of Engineers Malaysia (FIEM). He sits in many committees as construction industry advisor to UTM, UTHM, UTP, UPNM and UiTM. He also sits as a Board Member in the United Nation support International Research Council, CIB "Conseil International du Bâtiment" (International Council for Research and Innovation in Building and Construction). His research interest and expertise is within the area of Strategic Management of IT in Construction, Strategic Facilities Management in Health Sector, Structural dynamic (wind engineering and earthquake engineering), Prefabricated building construction and Open Building System and Manufacturing.

Wednesday Morning Keynote (March 9, 2016): 10:15 - 11:00 am

Speaker from PROTON Automobile - Malaysia

Wednesday Lunch Keynote (March 9, 2016): 1:00 - 2:00 pm



Dr. Rupy Sawhney
Heath Fellow in Business and Engineering
Professor, Industrial and Systems Engineering
University of Tennessee, Knoxville, USA

Rupy Sawhney is a Professor & Heath Fellow in Industrial and Systems Engineering at the University of Tennessee, Knoxville. He earned B.S. and M.S. in Industrial Engineering and Ph.D. degrees in Engineering Science and Mechanics from the University of Tennessee, Knoxville in 1981, 1984 and 1991 respectively. He was a Weston Fulton Professor and Department Head during 2010-2013. He is also a faculty for the newly created Center for Interdisciplinary Research and Graduate Education (CIRE) in Energy. His current research focuses on trying to use technology and innovation to enhance organizational productivity. Dr. Sawhney has assembled a team over the past five years that has a greatest critical mass within the history of the Industrial Engineering department to compete with other academic institutions in the lean area. His research

group at this moment consists of 40 Postdocs, Ph.D. and Master students. He has published significant journal papers, conference papers and has submitted for 5 patents. He has graduated more than 50 Master's and 8 Ph.D. students. His funded research projects are in the millions of dollars. He has worked with over 200 companies and is a recipient of various awards (Boeing Welliver Fellow, Alcoa Faculty Award, IIE Lean Teaching Award, Reuben Harris Award, and Accenture Teaching Excellence Award).



Conference Award Keynote, March 8, 2016, 7:00 pm

# **Hulas King**

Director, Diversity, Professional Affiliations & Global Community Relations Siemens PLM Software St. Louis, Missouri, USA

Hulas is responsible for the strategy and operational leadership of Siemens PLM Software Global Diversity Council. He also leads Professional Affiliations & Global Community Relations Teams, driving innovation and digitalization value for youth, displaced workers, strategic customers and business

partners. Mr. King is a decorated Vietnam veteran, a Certified Manufacturing Engineer and a Certified NC Manager. He was inducted into the African-American Biographies Hall of Fame for outstanding contributions in Business and Engineering. He represents SIEMENS on several professional boards including the Institute of Industrial Engineers, the Society of Manufacturing Engineers, Advancing Minorities' Interest in Engineering, the Stone Soup Foundation, the Accreditation Board for Engineering & Technology (ABET), the International Federation of Engineering Education Societies (IFEES) and the Professional Business Leadership Council. He travels extensively within the Americas, Europe, the Middle East and Asia Pacific, speaking at various technical seminars in support of Global Opportunities in PLM.

Hulas managed the GO PLM (Global Opportunities in Product Lifecycle Management) program, nurturing strategic partnerships that provide significant added value for academic institutions, youth development programs and our global communities. These partnerships exemplify SIEMENS as the PLM Industry Leader and are successful in developing technology environments where underutilized citizens of the world can work together to improve their economic conditions and promote peace. He served as McDonnell-Douglas' Program Manager for Enterprise Life-Cycle Processes for Team Columbus Engineering / Manufacturing in support of C-17 Production in Columbus, OH.

#### Education

- \* Belleville Area College, 1970: AS, Data Processing
- \* Southern Illinois University, Edwardsville, 1972: BS, Management Science/Data Processing
- \* Southern Illinois University, Edwardsville, 1974: MBA, Marketing and Business Administration
- \* Southern Illinois University, Edwardsville, 1975: MS, Government/International Relations.
- \* Southern Illinois University, Edwardsville, 1978: MS, Management Science and Systems
- \* Southern Illinois University, Edwardsville, 1979: SPC, Health Care Management Systems
- \* University of Missouri Columbia, 1983: MS, Industrial Engineering

### Thursday Morning Keynote Speaker (March 10, 2016): 9:30 - 10:15 am



### Dr. Hans-Juergen Hoyer

Secretary General of the International Federation for Engineering Education Societies (IFEES)

Executive Secretary of the Global Engineering Deans Council (GEDC) Resident Scholar in Global Engineering at Marquette University

Hans J. Hoyer is the Secretary General of the International Federation for Engineering Education Societies (IFEES), Executive Secretary of the Global Engineering Deans Council (GEDC), and Resident Scholar in Global Engineering at Marquette University. Former Director of International Programs and Strategy for the American Society for Engineering Education (ASEE) and co-founder of the Indo-US Collaborative for Engineering Education (IUCEE). Prior to 2006, Hans J. Hoyer was CEO of World Links, a spin-off of the World Bank. In this capacity, he worked globally on issues related to secondary education, teachers' education, and on-line collaborative learning focusing on

science and social studies among high school students across the globe.

Dr. Hoyer has been a Visiting Scholar at the Center for International Studies at MIT, a Fellow at Harvard's School of Education and Visitor at the Kennedy School of Government. He was dean of the graduate program at the School for International Training, World Learning and Executive Director of the Executive Training Program for global governmental and NGO leaders in Brattleboro, Vermont. Prior to this, he taught cultural anthropology and Latin American Studies at George Mason University in Fairfax, VA. and Montgomery College, Takoma Park, MD. He earned his Ph.D. at American University in Washington, D.C. and was a post-doctoral fellow at the Organization of American States, carrying out research in the Rio de la Plata region of South America. He is Honorary Professor in universities in India, Peru and Kazakhstan. He started his career as a Peace Corps Volunteer and high school teacher in Linares and Talca, Chile and has lived in over twenty countries including India, Sri Lanka, Chile, Peru, Brazil, Ecuador, Paraguay, Argentina, Mexico, South Asia, Belgium, and Sub-Saharan Africa (Kenya and Zimbabwe). Over his extensive career he has visited more than 133 countries, is fluent in four languages and conversant in an additional five languages.

Dr. Hoyer has led several international development programs, including CARE, Plan International, and Heifer International. In these latter roles, he held executive leadership positions such as Senior Vice-President/Chief Operating Officer, and Regional Executive and was responsible, among others, for raising large financial resources from a multitude of donors including government agencies, the World Bank, IAB, several foundations, corporations and private donors. He also represented the largest U.S. farming membership association as a spokesperson at the European Union and European Parliament in Brussels and also represented them in Mexico and Central America. He has served on the board of directors with Nelson Mandela of El Taller, a global civil society network headquartered in Tunisia as well as on several social-action community groups. He was also on the staff of the Inter American Foundation, created by the U.S. Congress to support socio-economic development throughout Latin America/Caribbean. He was on the advisory board of Hewlett Packard's e-Inclusion Global Advisory Board related to their work in South Africa and Founding member of the Board of the Engineering for the Americas (EftA) initiative under the umbrella of the OAS. He serves on the Editorial Committee of the Argentinean Journal of Engineering Education, Sciene and Technology. He has written and published on a broad range of subjects related to international development, politics, health, education, and engineering education. Born in Berlin, Germany, he immigrated to the US as a teenager. His wife is Canadian and he has four children who were born in the U.S., Brazil, Mexico and Belgium.

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### Thursday Morning Keynote Speaker (March 10, 2016): 10:15 – 11:00 am



## Prof. Dr. Noraini Kaprawi

Director of Strategic and Quality Management Office Faculty of Technical and Vocational Education University of Tun Hussein Onn Malaysia

Prof. Dr. Noraini Kaprawi is Director of Strategic and Quality Management Office at Universiti Tun Hussein Onn Malaysia (UTHM). Previously she was Dean of the Centre for Graduate Studies. She received Ph.D in Management of Higher Education from University of Manchester, United Kingdom, M.Sc. in Technology Management from University of Technology Malaysia (UTM), Postgraduate Teacher Certificate, Temenggong Ibrahim Teachers College (MPTI) in Johor Bahru and B.Sc. in Physics, from University of Aston in Birmingham, United Kingdom.

Dr. Noraini held positions at Teacher/Education Officer of Ministry of Education Malaysia during 1986 – 1996. She was Lecturer at Politeknik Port Dickson (1992-2000) and Assistant Director Technical and Vocational Education Planning and Research Division, Ministry of Education

(2000-2001). Dr. Noraini held various positions at Universiti Tun Hussein Onn Malaysia (UTHM) including lecturer, Assoc. Professor, Deputy Director of Continuing Education, Centre for Research Consultancy and Continuing Education, and Head of Manager for Institutional Project Management Office (iPMO Lead).

Dr. Noraini has served in many national and international professional organization including Wide involvement in National and Institutional TVE (Technical and Vocation Education) Projects. She has published many papers, provided workshops and attended national and international confeences. Many of her publication are related on technical and vocational education and training. Dr. Noraini has revived various awards including:

2012: Universiti Tun Hussein Onn Malaysia, Jasa Bakti 10 Tahun

2010: Research and Innovation Festival 2010, Universiti Tun Hussein Onn Malaysia, for the project Development of A New Empirical Based Competency Profile for Malaysian Technical and Vocational Education and Training (TVET) Instructors, Silver Medal

2009: Universiti Tun Hussein Onn Malaysia, Vice Chancellor Award

2007: Universiti Tun Hussein Onn Malaysia, Excellent Teaching Award

2006: 34th International Exhibition of Inventions of New Techniques and Products, Geneva, Bronze Medal

2006: The International Technology Exibition (ITEX 2006 in KLCC for the project of Curriculum Design Management System (CDMS), **Bronze Medal** 

2005: Kolej Universiti Teknologi Tun Hussein Onn, Potential Researcher Award

2003: Kolej Universiti Teknologi Tun Hussein Onn, Excellent Service Award

### Thursday Lunch Keynote Speaker (March 10, 2016): 1:00 - 2:00 pm



Rajiv Ghatikar
Vice President and General Manager
Siemens PLM
ASEAN/Australasia

Rajiv Ghatikar is the Vice President and General Manager for Siemens PLM Software's business in ASEAN and Australasia. Siemens PLM Software, a business unit of the Siemens Digital Factory Division, is a world-leading provider of product lifecycle management (PLM) software, systems and services with nine million licensed seats and 77,000 customers worldwide. Headquartered in Plano, Texas, Siemens PLM Software helps thousands of companies make great products by optimizing their lifecycle processes, from planning and development through manufacturing and support. Located in Hong Kong, Rajiv is responsible for managing all sales, sales support and services delivery for his region.

Prior to his current role, Rajiv was associated with PLM industry. From 1991 to 1998 he also worked with Procter & Gamble in both India and China in various financial roles with increasing levels of responsibility.

In charge of a region that is predominantly run through a network of channel partners, Rajiv's personal approach towards life is most helpful. As a forward thinker, Rajiv believes that it is important to build trust and mutual respect with his team, partners and customers so as to achieve the best possible results.

Born in Mumbai, India, Rajiv studied at both the St. Mary's School and the Sydenham College before completing his professional studies as a Chartered Accountant. Rajiv has spent most of his work life and career outside of India and is committed to developing the potential of the Asia Pacific region, which he sees as his home. A keen traveler and one who enjoys learning about different cultures, Rajiv spends most of his spare time visiting various countries with his wife. He is also actively involved in hiking and other outdoor activities.

# **Partner Universities**



Lawrence Technological University











University of Peradeniya Sri Lanka







Russia

# Submission received from the following countries and territories

Algeria France Australia Germany Bangladesh Ghana Botswana Hungary Brazil India Bulgaria Indonesia Canada Iran Chile Iraq China Italy Colombia Japan Costa Rica Jordan Croatia Korea Czech Republic Kuwait Egypt Latvia Ethiopia Libya Finland Malawi

Malaysia
Maldives
Mauritius
Mexico
Morocco
Namibia
Netherlands
New Zealand
Nigeria
Norway
Oman
Pakistan
Palestine
Philippines
Portugal

Qatar

Saudi Arabia
Senegal
Singapore
South Africa
Sweden
Spain
Sri Lanka
Taiwan
Thailand
Tunisia
Turkey
Ukraine
United Arab Emirates

United Kingdom

**United States** 

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# **IEOM Society**

"Achieving and Sustaining Operational Excellence"

# www.ieomsociety.org

# **IEOM Global Engineering Education**

JW Marriott Hotel, Kuala Lumpur, Malaysia
March 8-10, 2016

Website: http://ieomsociety.org/ieom2016/?page id=49

IEOM Society addresses the issues of Global Engineering Education. There are different levels of readiness of engineering graduates from various parts of the world. One of the main themes of this series is how to reduce the readiness gap around the world. The special focus is given to Industrial Engineering and Manufacturing Engineering including Engineering Management. Are the engineering graduates ready to take on the challenges of the current global economy? With the great success of Global Engineering Education Series of last IEOM conferences, IEOM 2016 KL Conference will have a dedicated session for the Global Engineering Education where distinguished speakers will discuss the readiness of engineering graduates for workforce around the world. Thirty six featured speakers will be from various part of the world to address engineering education challenges and opportunities.

Power point presentations/abstracts will be published in the conference proceeding and summary of the talk and bio of the speakers will be printed in the conference program.

Readiness and Competence of Engineering Graduates

#### **Global Engineering Education Chairs**

Dr. Funso Falade, Professor at University of Lagos, Nigeria and President, African Engineering Education Association

Dr. Abu Masud, Interim Dean of Graduate School and Boeing Global Engineering Professor, Wichita State University, Kansas, USA

Contact: info@ieomsociety.org

## PROGRAM (Global Engineering Education)

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March 8, 2016 (Tuesday)
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07:00 - 17:00 Registration

08:00 - 09:15 **Session I:** 

Dr. C. Chinnaraj, Professor of Mechanical Engineering and State Project Coordinator (TEQIP), Directorate of Technical Education, Chennai, Tamil Nadu, INDIA S. Indra Devi, Senior Lecturer, Department of Languages, Centre for Languages and Human Development, Universiti Teknikal Malaysia Melaka

Ahmed E. Haroun and Salih O. Duffuaa, Systems Engineering Department, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, KSA

09:30 - 10:00 Welcome Address - VC UTHM

10:00 – 11:00 Opening Keynote: Dr. Ron Askin, Professor of Industrial Engineering and Director of the School of CIDSE, Arizona State University.

11:00 - 11:30 Break

11:30 - 12:45 Session II:

Professor Dr. Mushtak Al-Atabi, Dean, School of Engineering, Taylor's University, Selangor Darul Ehsan, Malaysia

Professor R. Natarajan, Former Chairman, AICTE, Former Director, IIT Madras, India

Dr. Christoph Wunck, Professor, Business Computing Systems, Industrial Engineering, Jade University, Wilhelmshaven, Germany 13:00 – 14:00 Industry Keynote: Dr. Anwar Ali Mohamed, O.R. Freelance Consultant, Penang, Malaysia and Former Principal Engineer at Intel Malaysia

14:00 - 14:30 Break

14:30 - 15:45 Session III:

Dr. Alok Verma, Ray Ferrari Professor and Chair, Department of Engineering Technology, Old Dominion University, Norfolk, Virginia, USA

Dr. Ramiro Jordan, Professor and Associate Dean of Engineering for International Programs, University of New Mexico, USA and ISTEC founder, IFEES ExCom

Dr. Mohammad Yeakub Ali, Professor and Head, Department of Manufacturing and Materials Engineering, International Islamic University Malaysia

16:00 - 17:45 Session IV:

Dr. Chan Chee-Ming, Associate Professor and Deputy Dean (Academic and Research), Centre for Graduate Studies, Universiti Tun Hussein Onn Malaysia Dr. Ayham Jaaron, Asst. Prof. in IE, Director of Quality Assurance Unit, Director of ABET Centre, An-Najah National University, Nablus, West Bank, Palestine Prof. Dr. Gunduz Ulusoy, Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul, Turkey

17:30 - 19:00 POSTER SESSION and Student Chapter Mixer

#### March 9, 2016 (Wednesday)

07:00 - 17:00 Registration

08:00 - 09:15 Session V:

Dr. Adagbonyin Moses Obiazi, Dean, Faculty of Engineering and Technology, Ambrose Alli University, Nigeria and President, African Engineering Deans Council

Dr. C. B. Gupta, Professor, Department of Mathematics, Birla Institute of Technology and Science, Pilani (Raj.), India x
Dr. Jafri Mohd Rohani, Head - Industrial Engineering Programme, Department of Materials, Industrial & Manufacturing Engineering, Universiti Teknologi Malaysia

09:30 - 10:15 Keynote: Ir. Dr. Zuhairi Abd. Hamid, Executive Director, Construction Research Institute of Malaysia (CREAM), Kuala Lumpur, Malaysia

10:15 - 11:00 Keynote: Speaker from Proton Automobile

11:00 - 11:30 Break

11:30 - 12:45 Session VI:

Dr. Alfredo Soeiro, Associate Professor, University of Porto, Portugal and Past President - European Society of Engineering Education

Dr. Rosemary Seva, Dean of Gokongwei College of Engineering, De La Salle University (DLSU), Manila, Philippines

Dr. Asela K. Kulatunga, Senior Lecturer, Department of Production Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka

13:00 – 14:00 Keynote: Dr. Rupy Sawhney, Heath Fellow in Business and Engineering, Professor of Industrial and Systems Eng., University of Tennessee, Knoxville, USA

14:00 - 14:30 Break

14:30 - 15:45 Session VII:

Dr. Md. Mizanur Rahman, Senior Lecturer, Faculty of Mechanical Engineering, University Technology Malaysia (UTM), Skudai, Johor Bahru, Malaysia

Dr. Pal Pandi Ammavasi, Associate Professor, Bharath Niketan Engineering College, Aundipatty, Tamilnadu, India

Dr. Eldon Caldwell, Director, Industrial Engineering Department, Engineering School, University of Costa Rica

15:45 - 16:00 Break

Dr. Abu Masud, Boeing Global Engineering Professor, Professor of Industrial and Manufacturing Engineering, Wichita State University, Kansas, USA

Dr. Hans-Juergen Hoyer, Secretary General of the International Federation for Engineering Education Societies (IFEES) and Resident Scholar - Marquette University

Dr. Funso Falade, Department of Civil & Environmental Engineering, University of Lagos, Akoka, Lagos, Nigeria and President, African Eng. Education Association Hulas King, Director, Diversity, Professional Affiliations & Global Community Relations, Siemens PLM Software, St. Louis, Missouri, USA

19:00 – 22:00 CONFERENCE AWARD DINNER, AND CULTURAL PROGRAMS

Award Keynote: Hulas King, Director, Diversity, Professional Affiliations & Global Community Relations, Siemens PLM Software, St. Louis, Missouri, USA

# March 10, 2016 (Thursday) 07:00 – 17:00 Registration

08:00 - 09:15 Session IX:

Dr. Khairiyah Mohd Yusof, Director, Centre for Engineering Education (CEE), Universiti Teknologi Malaysia, Johor Bahru, Malaysia

Dr. Amar Partap Singh Pharwaha, Professor, Sant Longowal Institute of Engineering & Technology (SLIET)-Deemed University, Longowal, Sangrur, Punjab, India

Dr. Funso Falade, Department of Civil & Environmental Engineering, University of Lagos, Nigeria and President, African Engineering Education Association

09:30 - 10:15 Keynote: Dr. Hans-Juergen Hoyer, Secretary General of the International Federation for Engineering Education Societies (IFEES)

10:15 - 11:00 ote: Prof. Dr. Noraini Kaprawi, Dean-Centre for Graduate Studies, Faculty of Technical and Vocational Education, University of Tun Hussein Onn Malaysia

11:00 - 11:30 Break

11:30 - 12:45 Session X:

Dr. Kamel Hawwash, Professor in the School of Civil Engineering, Univeristy of Birmingham, UK and Immediate Past President of SEFI

Dr. Charles Mbohwa, Professor and Vice-Dean Postgraduate Studies, Research and Innovation, University of Johannesburg's (UJ), South Africa

Dr. S. C. Naik, Professor, Former Head of Chem Engg and Dean, National Institute of Technology, Rourkela, India and Past President, The Institution of Engineers

13:00 – 14:00 Keynote: Rajiv Ghatikar, Vice President and General Manager, Siemens PLM, ASEAN/Australasia

14:00 - 14:30 Break

Professor Khedidja ALLIA, Research Laboratory of Science in Industrial Process Engineering (LSGPI), USTHB - FGMGP, Bâb-Ezzouar, Algiers- Algeria Shri. Mahesh Anant Kakade, Controller of Examinations, Shivaji University, Kolhapur and Chairman, Indian Society for Technical Education, Maharashtra-Goa Dr. Hamid Parsaei, Prof. of Industrial and Systems Engineering, Texas A&M Univ. (College Station) and Director of Academic Outreach - Texas A&M Univ. Qatar 15:45 - 16:00 Break

16:00 - 17:45 Session XII:

Nidhi M B, A/HoD Mechanical Engineering Department, MarBaselios College of Engineering & Technology (MBCET), Thiruvananthapuram, Kerala, India Dr. P. Muredzi, Dean - School of Engineering & Technology, Harare Institute of Technology, Zimbabwe

17:30 - 19:00 Closing Mixer

# **DISTINGUISHED SPEAKERS**

# Tuesday (March 8, 2016)

Session I: Global Engineering Education 8:00 – 9:15 am - Room Starhill 4

Session Chair: S. Indra Devi. Universiti Teknikal Malavsia Melaka

08:00 - 08:25 (Tuesday)



Dr. C. Chinnaraj
Professor of Mechanical Engineering and
State Project Coordinator (TEQIP)
Directorate of Technical Education
Chennai, Tamil Nadu, INDIA

#### Global Engineering Education Challenges and Opportunities

Prof. Dr. C. Chinnaraj is a Professor of Mechanical Engineering, Government College of Engineering, Salem, Tamil Nadu, India. He is now a State Project Coordinator (TEQIP), Directorate of Technical Education, Chennai-25, Tamil Nadu, India. Dr. Chinnaraj has received Ph.D. and master from ANNA University, Guindy, Chennai and B.E (Mechanical) from Madras University, Chennai, India. He has 32 Years as a Teacher in various State Government Engineering Colleges, acted as Examiner, Question paper setter and Chairman for various University examinations.

Governing and Academic Council Member for many Engineering Colleges and Polytechnic Colleges and guided many Undergraduate and Post Graduate student Projects. He also received certificate for Guiding the State level Student best Project (Solar Wind ventilated Drier) and assisted the head of Institution in development of department, starting of new Post Graduate degree course in thermal engineering and Institution.

Dr. Chinnaraj has 8 years in administrative line at Directorate of Technical Education, Chennai-25, Tamil Nadu initially as Assistant Director (planning) and then as Project Coordinator for the World Bank assisted Technical Education Quality Improvement Programme (TEQIP). He assisted the Commissioner of Technical Education in execution of State's various Schemes, starting of new Government Polytechnic and Engineering Colleges, curriculum/syllabus revision for Polytechnic Colleges, formation of skill development centre, Quality Circle and Teaching Learning Centre at Engineering Colleges and also for conducting Faculty Development Programmes. He visited leading Technical Universities in GERMANY, Peking University in BEIJING, CHINA and University of Buffalo, USA. Dr. Chinnaraj has served two times as State Secretary and Treasurer for Tamil Nadu and Puducherry State Indian Society for Technical Education (ISTE) Section and two times received the best section National award for the drive in the ISTE membership, starting of ISTE chapters, encouraging the institutions to conduct the State level and National level Programmes for faculty and students. Two times National Executive Council Member of ISTE and helped the Institutions to conduct the Faculty Development Programmes, National Seminar, Conference and workshop for Faculty and Students. He represented and Lead the Anna University Volley Ball Team.

08:25 - 08:50 (Tuesday)



S. Indra Devi
Senior Lecturer, Department of Languages
Centre for Languages and Human Development
Universiti Teknikal Malaysia Melaka

A Multiliteracies Approach in the Delivery of Engineering Education for Future Global Engineers: The Malaysian Context

S. Indra Devi who serves as a senior lecturer at the Department of Languages in the Technical University of Malaysia Melaka currently teaches Technical Communication and English for Professional Communication. She holds a Diploma in ESL from University Malaya, Bachelor Degree in Education (TESL) from Putra University Malaysia, Master in Arts (TESL) from The National University of Malaysia and presently she is about to complete her PhD in English Language Studies. With 30 years of teaching experience and as a consultant in the field of TESL and ESP, she conducts various courses for undergraduate engineers, teaching engineers and professionals in government and statutory bodies besides being a trainer for the IELTS examination. Her research interest include Engineering Education, TESL, ESP as well as Multimodal and Computer Mediated Communication. As an instructor in a technical university, she has gained vast

practical experiences in relation to communication skills and competencies among engineers as well as its implication towards global engineering practice. She has authored various scientific journal articles on topics related to oral communication apprehension, communication competencies, strategic competence and oral presentations of undergraduate engineers besides designing assessments, needs surveys and language related courses for engineers. Her other research publications include topics related to university-industry strategic alliances, employer engagement in teaching and learning, and her most recent research is related to Multimodal and multiliteracies approach as well as neuroscience intervention in ESP instruction for engineers. She has authored several books and her recent book is Grammar for Technical Writing which was specifically written for engineers and was published by Pearson Publishers. She is also active in various community projects and leadership posts. Due to her excellent achievements, she has received the award for Excellence in Service from UTeM in 2014.

08:50 - 09:15 (Tuesday)

An Effective Organizational Structure to Implement Strategic Plans In Higher Education Institutions

Ahmed E. Haroun and Salih O. Duffuaa Systems Engineering Department KFUPM, Dhahran, KSA

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### Session II: Global Engineering Education 11:30 am – 12:45 pm - Room Starhill 4

Session Chair: Dr. Christoph Wunck, Jade University, Wilhelmshaven, Germany

11:30 - 11:55 (Tuesday)



Professor Dr. Mushtak Al-Atabi Dean, School of Engineering Taylor's University Selangor Darul Ehsan Malaysia

**Bio:** Professor Mushtak Al-Atabi is currently the Dean of School of Engineering at Taylor's University, Malaysia. His research interests include engineering, entrepreneurship, education and leadership. He is an Honorary Chair at the School of Mechanical Engineering of the University of Birmingham (UK) and the Editor-in-Chief of Journal of Engineering Science & Technology. Professor Al-Atabi published two books, "Think Like an Engineer" and "Driving Performance" and he has numerous research publications, awards and honours. He is a Co-Founder of the Global Challenges Alliance, Fellow of the Institution of Mechanical Engineers (FIMechE) and an ExCo of the Global

Engineering Deans Council. Professor Al-Atabi is an innovative educator; he pioneered the CDIO (Conceive, Design, Implement, Operate) and delivered the first MOOC (Massive Open Online Course) in Malaysia. He trains executives from Multinational Corporations including banks and energy companies.

11:55 - 12:20 (Tuesday)



Professor R. Natarajan Former Chairman, AICTE Former Director, IIT Madras, India

#### **Emerging Engineering Education Challenges and Opportunities -- Indian Perspectives**

R Natarajan received his M.A. Sc and Ph.D degrees from the University of Waterloo, Canada. He has worked as a National Research Council Fellow in Canada, and as a Humboldt Research Fellow in Germany. He served as The Director of the Indian Institute of Technology, Madras from 1995 to 2001, and as the Chairman of The All India Council for Technical Education, a statutory body of the Government of India, from 2001 to 2004. He was the Vice — President of The Indian National Academy of Engineering during 2002-2006, and the Chairman of the Research Council of the Central Fuel Research Institute, Dhanbad during 1995-2005. He is a Fellow of: Indian National Academy of Engineering, Indian Society for Technical Education and several other Professional Societies. He has been conferred Honorary Doctorate Degrees by: The University of South Australia, Jawaharlal Nehru Technological University (A.P.), and four other Indian Universities. He has been a Member of the Editorial Boards of: Fuel (London), Fuel Science and Technology, ASEE Journal of Engineering Education, and several other Journals.

12:20 - 12:45 (Tuesday)



Dr. Christoph Wunck
Professor
Business Information Systems, Industrial Engineering
College of Management, Information, Technology
Jade University
Wilhelmshaven, Germany

"Computer Science Education for Industrial Engineers - Meeting the Challenges of the Smart Factory Paradigm"

Prof. Dr. Christoph Wunck holds a full professorship for Business Information Systems at Jade University since 1999. He teaches courses on Distributed Applications, Software Engineering, Programming, Electronic Business Systems and Process Management. He holds a doctoral degree from the faculty of Mechanical Engineering and a Master's degree (Diplom-Ingenieur) in Electrical Engineering, both from RWTH Aachen University. He is the current director of the Institute of Information Processing in Plastics Manufacturing at Jade University.

His professional experience covers project management and consulting services for a major European business consultancy and work as a consulting engineer for manufacturing and electronics industries. He has served Jade University for nine years in the position of Dean and Dean of Studies.

His research interest include:

- Application of IT and Business Information Systems in Industrial Engineering
- Distributed Manufacturing Execution Systems, Multi-Agent Systems, Data Science, Manufacturing Intelligence
- IT Governance and Security in Operations and Supply Chain Management

Prof. Dr. Wunck is well connected in his field. He serves in the management of conferences and is a reviewer for conference papers and books. He is a member of IEEE Industrial Electronics Society, IEOM, INFORMS, ISCA, ISACA and VDI.

# Session III: Global Engineering Education 2:30 – 3:45 pm (Tuesday) - Room Starhill 4

Session Chair: Dr. Mohammad Yeakub Ali, International Islamic University Malaysia

2:30 - 2:55 (Tuesday)



**Dr. Alok Verma**Ray Ferrari Professor and Chair
Department of Engineering Technology
Old Dominion University
Norfolk, Virginia, USA

Bio: Dr. Alok K. Verma is Ray Ferrari Professor and, Chair of the Engineering Technology Department at Old Dominion University. Dr. Verma also serves as the chief editor of the International Journal of Agile Manufacturing. Prof. Verma received his B.S. in Aeronautical Engineering from IIT Kanpur, MS in Engineering Mechanics and PhD in Mechanical Engineering from ODU. Prof. Verma is a licensed professional engineer in the state of Virginia, a certified manufacturing engineer and has certifications in Lean Manufacturing and Six Sigma. He has organized several international conferences as General Chair, including ICAM-2006, ICAM-1999, Lean Educator Conference and also serves as associate editor for two International Journals. His scholarly publications include 35 journal papers and 55 papers in conference proceedings. Dr. Verma has developed and delivered training program in Lean Enterprise & Design for Manufacturing for Northrop Grumman Newport News, STIHL and several other companies in U.S. At ODU, he has developed the Automated Manufacturing Laboratory. He was PI on several funded projects from National Shipbuilding Research Program (NSRP),

National Science Foundation (NSF) and Department of Education (DOE). He is well known internationally and has been invited to deliver keynote addresses at several national and international conferences on Lean/Agile manufacturing. Dr. Verma has received the Regional Alumni Award for Excellence, the International Education Award at ODU and Ben Sparks Medal by ASME. He is active in ASME, ASEE, SME, IIE and SNAME. Dr. Verma continues to serve the Hampton Roads community in various leadership positions.

2:55 - 3:20 (Tuesday)



**Dr. Ramiro Jordan**Professor and Associate Dean of Engineering for International Programs
Department of Electrical and Computer Engineering
University of New Mexico
ISTEC founder, IFEES ExCom

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. He is a dedicated educator, actively creating educational infrastructure in academic institutions worldwide with emphasis on the "culture of quality" in educational programs for accreditation and certification. He is driving innovative curricula development programs such as *Peace Engineering*, is establishing International Graduate Double Degree programs and is creating opportunities for student engagement and leadership development. He was actively involved with the University Faculty Senate and served on the Operational

Committee that, with the Faculty President, ensures shared governance of the University. Dr. Jordan holds a faculty position at the Universidad Nacional de La Plata, Argentina, and has served as visiting and resident professor at universities in Brazil, Costa Rica, Chile, Mexico, Peru, Bolivia, Argentina, Uruguay, Colombia, Ecuador, Paraguay, Spain, and Venezuela, among others.

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 is on the Board of the *Engineering for the Americas Initiative*, an initiative hosted by the Organization of American States involving all Heads of State in the Americas Region. He is advisor to the International Conference in Engineering Education (ICEE) and advisor to the Institute of Electrical and Electronics Engineers (IEEE) Latin America Region, IEEE Senior member. He served as a member of the National Academy of Sciences of Bolivia, as special consultant to the Latin American ambassadors to the United Nations in the area of Science and Technology, and is advisor to several governments and multilateral organizations (OAS, IIDB). 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.

An active member of scientific and professional societies including ASEE and IEEE, Dr. Jordan has published extensively in books, journals, magazines and on the Web. He serves on the editorial board of *Computers and Software Engineering*, is editor of *Journal of Computer Science and Technology*, and is editor and advisor to *The Ibero American Journal on Technology in Education and Education in Technology*. In addition to conference presentations, he has given over 80 invited Keynote presentations. He has received many national and international Honors and Awards including two *Silver Quilt Awards*, Motorola; *International Excellence Award*, University of New Mexico; *Growing with Technology Award*, Cisco Systems; *Professional Progress Award*, Kansas State University; *Award for Contributions in Higher Education and Science and Technology*, Organization of American States; *Achievement Award for Innovations and Accomplishments in Multilingual IT Infrastructure in Engineering Education*, iNEER-ICEE; and Award for Meritorious Work in Engineering and Computer Education, International Conference on Engineering and Computer Education. He is bestowed with the Order of Rio Branco, in the rank of Officer, by the Brazilian Government.

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.

3:20 - 3:45 (Tuesday)



**Dr. Mohammad Yeakub Ali**Professor and Head
Department of Manufacturing and Materials Engineering
Faculty of Engineering, International Islamic University Malaysia
Kuala Lumpur, Malaysia

#### Malaysian Engineering Education and Accreditation

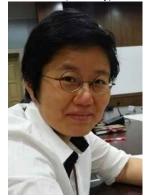
Dr. Mohammad Yeakub Ali is a Professor in Manufacturing Engineering. Currently he is the Head of the Department of Manufacturing and Materials Engineering at Kulliyyah of Engineering, International Islamic University Malaysia (IIUM). Upon completion of his PhD. in 2002, he started his career as a Research Fellow in Precision Engineering and Nanotechnology Centre at Nanyang Technological University, Singapore. He then joined IIUM as an Assistant Professor in 2004 in the

Department of Manufacturing and Materials Engineering. Since then, he engaged actively in teaching, research, supervision, administration, securing research grants, and publishing research findings in reputed journals and proceedings. He has published more than 200 technical papers in different reputed journals and conference proceedings at national and international level. He is also reviewer of many reputed international journals and funding projects. He is actively involved in professional societies and institutions including IMechE (UK), ASME (USA), euspen (Europe), IEM (Malaysia), IEB (Bangladesh), and BSME (Bangladesh). He holds various positions in organizing international conferences such as Technical Chair for ICAMME 2012, Chairman for ICAMME 2014, and Technical Committee for AMPT 2009.

# Session IV: Global Engineering Education 4:00 – 5:15 pm (Tuesday) - Room Starhill 4

Session Chair: Dr. Gunduz Ulusoy, Sabanci University, Istanbul, Turkey

4:00 - 4:25 (Tuesday)



Dr. Chan Chee-Ming Associate Professor and Deputy Dean (Academic and Research) Centre for Graduate Studies Universiti Tun Hussein Onn Malaysia Batu Pahat, Johor, Malaysia

Bio: Chee-Ming Chan is an Associate Professor with the Civil Engineering Technology Department, Faculty of Engineering Technology, Universiti Tun Hussein Onn Malaysia. She is presently holding the office of Deputy Dean in Academic and Research at the Centre for Graduate Studies in the University. Her area of expertise includes geo-materials, engineering education and higher education improvement. More recently, Dr. Chan's current work on dredged materials from Malaysian waters has gained momentum and support from the Ministry of Science, Technology and Innovation and Department of Marine, Malaysia. She is also involved in professional bodies, including the Society for Engineering Education Malaysia (SEEM), Malaysian Geosynthetics Society (MyIGS), Institution of Engineers Malaysia (IEM), Board of Engineers Malaysia (BEM), and is an education quality auditor for the Malaysian Qualification Agency (MQA). From 2009-11, Dr. Chan served as a Postdoctoral Research Fellow at the Port and Airport Research Institute (PARI), Japan.

4:25 - 4:50 (Tuesday)



Dr. Ayham Jaaron
Asst. Prof. in Industrial Engineering
Director of Quality Assurance Unit
Director of ABET Centre
An-Najah National University
Nablus, West Bank
Palestine

Bridging the Gap between IE Qualifications and Employers Requirements: lessons from Palestinian IE Programs

Abstract: It is evident that due to fierce global competition and rapid manufacturing technological changes many industrial engineers lag behind in various production, quality, and manufacturing technologies. This has caused a problem to manufacturing firms as they are not easily able to find highly skilled engineers, especially industrial engineers, to satisfy their technological and managerial needs. The aim of this presentation is to report on the case of the Palestinian Industrial

Engineering programs to illustrate how these programs were able to reduce the readiness gap of their industrial engineering graduates to satisfy Palestinian manufacturing sector priorities operating under Israeli occupation restrictions. The presentation discusses the benefits of involving industrial engineering programs stakeholders, especially employers from the manufacturing sector, which is of two-fold. First, the involvement of these employers will help identify their ever evolving general and technical training needs that educational institutions can offer to close training needs gap. Second, their involvement is of significant importance in the process of customizing curriculum of Industrial Engineering programs to help reduce readiness gap of graduates for manufacturing firms' requirements. The presentation highlights the benefits of the requirements of international Accreditation Board for Engineering and Technology (ABET) in the process of readiness gap reduction.

Biography: Dr. Ayham Jaaron is Director of Quality Assurance Unit at An-Najah National University, Nablus, Palestine. He is also Director of ABET Centre at the Faculty of Engineering and Information Technology, and assistant professor at the Industrial Engineering Department. He received his PhD degree

(full time) in Manufacturing Engineering and Operations Management from the Wolfson School of Mechanical and Manufacturing Engineering, Loughborough University, England, UK in 2010. He was a full-time instructor at the Industrial Engineering Department of An-Najah National University, Nablus, Palestine from 2005–2007. Dr. Jaaron is recognized for his expertise and contributions to the quality of education in Palestine. He led the largest ABET Accreditation project in the region for seven engineering programs simultaneously at An-Najah National University, that resulted in a successful ABET Accreditation process. He is extensively involved in drawing and planning quality assurance policies for academic programs. His research activities have focused on service operations, service quality, resource utilization, organizational resilience, and human aspects of motivation in the manufacturing and service sectors. He was an Academic Visitor to the University of Strathclyde, Glasgow, UK in 2006. He is also academic visitor to the Wolfson School of Mechanical and Manufacturing Engineering of Loughborough University, England, UK.

4:50 - 5:15 (Tuesday)



Prof. Dr. Gunduz Ulusoy
Faculty of Engineering and Natural Sciences
Sabanci University
Orhanli, Tuzla
Istanbul, Turkey

Gündüz Ulusoy received his BS in mechanical engineering from Robert College, Istanbul in 1970; MS in mechanical engineering from University of Rochester in 1972 and PhD in operations research from Virginia Tech in 1975. He worked as a researcher in Marmara Research Center in 1976. From 1976 to 1999 he was a faculty member in the Industrial Engineering Department of Boğaziçi University, Istanbul. He was a postdoctoral fellow at Lancaster University in 1982. During the years (1984-1985), he was on leave from Boğaziçi University and worked as a manufacturing systems engineer at a white goods manufacturer in Istanbul. He served as the Chairman of the Industrial Engineering Department (1985-1993) and Vice Rector

of Boğaziçi University (1992-1994). He was a member of the Executive Committee of the Turkish Scientific and Technical Research Council (1993-1997) and Chairman of the Marmara Research Center (1995-1997). In 1999, he joined the Faculty of Engineering and Natural Sciences at Sabanci University in Istanbul as the Founding Coordinator of the Manufacturing Systems Engineering Program. In 2001, he initiated the Leaders for Industry Program – a double degree joint program between the Faculty of Engineering and Natural Sciences and the Graduate School of Management and was the Co-Director till 2004. In 2003, he founded the TUSIAD – Sabanci University Competitiveness Forum and has served as the Founding Director of the Forum till 2008. Between 2007-2010 he was a member of the Standing Committee on Sustainable Competitiveness of the Manufacturing Industry established by the Office of the Prime Minister of Turkey.

His current research focuses on technology and manufacturing strategies and on scheduling and evolutionary algorithms in production and project management. He has published research articles in Interfaces, Operations Research, Journal of the Operational Research Society, European Journal of Operational Research, International Journal of Production Economics, International Journal of Production Research, IIE Transactions, International Journal of Production and Operations Management, Journal of Operations Management, Computers & OR, and Flexible Services and Manufacturing. He was an Associate Editor of the European Journal of Operational Research (1981-2000) served as a Contributing Editor to the International Abstracts in OR (1978-1992) and is currently on the Editorial Board of the Journal of Operations and Logistics and the Turkish Transactions on Operational Research. He edited several journal issues as Guest Editor and several Conference Proceedings.

He is a founding member of the Informatics Foundation, Science Center Foundation, and Scientific and Technical Research Foundation. During 1994–2000 he served on the Board of Elginkan Foundation. He was the Chairman of the National Quality Award Committee during 1998-2002. He is a member of INFORMS, Turkish Quality Society, Turkish Machine Design and Manufacturing Society, and Turkish Operational Research Society.

# Wednesday (March 9, 2016)

Session V: Global Engineering Education 8:00 – 9:15 am (Wednesday) - Room Starhill 4 Session Chair: Dr. Jafri Mohd Rohani, Universiti Teknologi Malaysia

08:00 - 08:25 (Wednesday)



Engr. Prof. Adagbonyin Moses O. Obiazi
Dean, Faculty of Engineering and Technology
Ambrose Alli University
Nigeria
President, African Engineering Deans Council, AEDC

Engr. Prof. Adagbonyin Moses O. Obiazi was born at Agbor in Delta state. He attended the prestigious Ika Grammar School, Agbor from 1974 to 1979 obtaining the West African School Certificate with Distinction. He proceeded immediately to the University of Benin to study Electrical/Electronics Engineering, graduating in 1984 with 2nd Class Hons, Upper Division. He had his Masters Degree in Electrical Engineering from the University of Lagos in 1991 and capped it with a PhD in Electrical Power and Machines from Ambrose Alli University, Ekpoma, supervised by the renowned Engr. Prof. Philip Kuale.

Prof. Obiazi started his working career in the Federal Polytechnic University, Auchi in 1985 after his NYSC in Sokoto State. In the quest for higher levels of engagement, Engr. Obiazi joined the services of then Bendel State University,

Ekpoma (now, Ambrose Alli University) in 1987 where he has risen through the ranks from Graduate Assistant to his current status as a Professor of Electrical Engineering and Dean of the Faculty of Engineering and Technology. He was the Head of Department of Electrical/Electronics Engineering [1997-1999], Sub-Dean of the Faculty of Engineering and Technology, Member of the University Senate and Member/Chairman of over 40 University committees/panels. He is currently serving as the Chairman of the Central Bank intervention Projects in Ambrose Alli University.

At the professional level, Engr Prof Obiazi was elected a corporate member of the Nigerian Society of Engineers [NSE] in 1993. As an active member of NSE, he was made Secretary, NSE, Ekpoma Branch from 1994-1997 and Chairman of the Branch for five years (1997-2002). During his Chairmanship, the branch won a national merit award as the Most Improved Branch in Nigeria. In 1999, he was made a life member of NSE. He has been a member of the National Executive Council of NSE from 1997 to 2002 and from 2012 to date. He has served in several committees of NSE at both national and local levels. NSE national committees such as Finance and General purpose Committee, Education and Training Committee, Awards and Endowment Committee, Conference Planning Committee, Codes and Standards Committee among others. As a registered Engineer with COREN (Council for the Regulation of Engineering in Nigeria), COREN in 2006 made him a member of Engineering Regulation and Monitoring (ERM) Committee. He has also served as a member of COREN accreditation team to some eight universities and two polytechnics. For eleven years (2001-2012), he was an External Examiner to the Petroleum Training Institute (PTI), Effurun, and since 2011, External Examiner to Delta State University, Abraka. In 1991, Engr. Obiazi was sponsored by UNESCO to Kumasi, Ghana to present a research paper at an International Engineering Conference, while in 2013, he was sponsorsed to the Conference of the Global Engineering Deans Council [GEDC] held in Chicago, USA. In 1994, the Delta State Government appointed him as a Member of the Delta State Public Utilities Board (PUB).

In May 2013, Engr. Prof OBIAZI was appointed the National Secretary of the Committee set up by COREN [Council for the Regulation of Engineering in Nigeria] to develop COREN Minimum Benchmarks for the training of Engineers in Nigerian Universities. In 2006, Shell Petroleum Development Company (SPDC) appointed Engr. Obiazi as a research advisor on sabbatical to help with the construction and installation work on the new Afam VI power station in Rivers State. In March, 2010, the Edo State Government appointed Engr. Prof. Obiazi as a member of the Governing council of Edo State Institute of Technology and Management, Usen (a polytechnic), a position he held till Sept, 2012.

Engr. Prof. Obiazi has received several awards from students, staff, religious and professional bodies and groups for outstanding contributions to engineering, education, national development and socio-cultural advancement. Engr. Prof. Obiazi is well published in both local and foreign journals and has presented papers in several local and international conferences.

In Sept, 2012 Eng. Prof .Obiazi was elected the Chairman, Committee of Deans of Engineering and Technology of Nigerian Universities.

8:25 - 8:50 (Wednesday)



**Dr. C. B. Gupta**Professor, Department of Mathematics
Birla Institute of Technology and Science
Pilani(Raj.), India

A recipient of Shiksha Rattan Puraskar 2011, Best Citizens of India award 2011, listed in Marquis who is who in Science and Technology in the world December 2010, 2013 and listed in top 100 scientists of world in 2012, glory of India Award 2013. Dr. Gupta who is presently working as a Professor in the Department of Mathematics, obtained his Master's degree in Mathematical Statistics and Ph.D. in Operations Research from Kurukshetra University, Kurukshetra. His field of specialization is Applied Statistics, Optimization and Operations Research. A number of students have submitted their thesis/ dissertation on these topics under his supervision. He has published a large number of research papers on these topics in peer reviewed national and international journals of repute. He has authored/ co-authored 14 books on the topics Probability and Statistics, quantitative Methods, Optimization in

Operations Research, Advance Discrete Mathematics, Engineering Mathematics, Advance Mathematics etc. He is also on the editorial board and reviewer of a number of national and International journals.

Dr. Gupta is a member on various academic and management committees of many Institutes/ Universities. He has participated in large number of national and International conferences in which he has delivered invited talks and chaired technical sessions. Dr. Gupta has been member of Rajasthan board of school education and also member of various committees of RPSC Ajmer, UPSC, New Delhi and AICTE, New Delhi. He was awarded best paper award at the annual conference of National Academy of Science India held at Calcutta University, Kolkata from 15-17 December 2009.

8:50 - 9:15 (Wednesday)



Dr. Jafri Mohd Rohani
Head of the Industrial Engineering Programme
Department of Materials, Industrial and Manufacturing Engineering
Faculty of Mechanical Engineering
Universiti Teknologi Malaysia
Skudai, Johor, Malaysia

Jafri Mohd Rohaniis a Senior Quality and Statistical Engineering Lecturer. He is also Head of the Industrial Engineering Programme at the Department of Materials, Industrial and Manufacturing Engineering, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Skudai, Johor. Currently, he is the President of JohorCost and Quality Engineers Society. He is a member of the American Society for Quality (ASQ) and Human Factor Society of Malaysia.

# Session VI: Global Engineering Education 11:30 am – 12:45 pm (Wednesday) - Room Starhill 4

Session Chair: Dr. Rosemary Seva, De La Salle University (DLSU), Manila, Philippines

11:30 - 11:55 (Wednesday)



Dr. Alfredo Soeiro
Associate Professor
University of Porto, Portugal
Past Academic Director in Civil Engineering
Past Pro-Rector of the University of Porto for Continuing Education
Past President - European Society of Engineering Education

Dr. Soeirohas been the representative of Universidade do Porto in Continuing Education and founder of EUCEN (European Universities Continuing Education Network) since November 1991. He was vice president of EUCEN for seven years, a member of the Management Committee and was also founder of RECLA (Latin American Continuing Education Network).

Dr. Soeiro was founder of the Continuing Engineering Education office of the College of Engineering of the University of Porto in 1995; was Pro-Rector of Universidade do Porto in charge of Continuing Education between 1998 and 2003; was founder and President of AUPEC – Portuguese Association of Universities for Continuing Education between 2001 and 2005; from 2001 until 2004 was president of IACEE, International Association of Continuing Engineering Education, Washington DC, USA; between 2003 and 2005 was president of SEFI Societe Europeanne pour la Formation des Ingenieurs; between 2004 and 2008. He was the academic director and vice-director of Civil Engineering of the University of Porto.

Dr. Soeiro was a Fulbright scholar between 1985 until 1989 in the University of Florida to obtain his doctoral degree; between 1996 and 1999 was the President of the Scientific Commission of the Thematic Network THENUCE (Thematic Network on University Continuing Education); from 1999 and 2005 was a member of European ODL Liaison Committee, representing EUCEN; in 2000 was the co-chair of the conference of the Portuguese Presidency of the European Union, Higher Education and New Publics, Porto; from 2002 to 2013 he was member of the Municipal Education Council of the city of Porto, representing the University of Porto and the Higher Education sector; since 1997 until 2004 he has been an invited expert of the European Commission to evaluate projects in adult education and in thematic networks; was an invited expert of Group G of the European Commission within the framework of the Lisboa Objectives between 2002 and 2005. He was an invited speaker at the 800th Anniversary of the University of the Sorbonne in the closing session coordinated by the French minister of education, Claude Allègre, entitled the University without Walls, 1998.

Dr. Soeiro published and edited the first ten editions of the newsletter of EUCEN between 1993 and 1997. He was a member of the editorial board of the Journal of Higher Education and Outreach between 2001 and 2006; has published and presented several articles in newspapers and magazines about lifelong learning, continuing education and quality of continuing education; has created and maintained the web pages of EUCEN (between 1994 and 1998) and of AUPEC since 2001; has led several lobbying activities at the European level, like the response to the Memorandum of Higher Education in 1994 and the Response to the European Quality Framework, and at the national level participating in the national meetings of AUPEC; has edited for AUPEC the management manual of centers of continuing education and the survey of industry needs of continuing education. Dr. Soeiro has coordinated, besides participating in others, several European projects sponsored by the European Commission in the areas of adult learning and continuing education and the most important ones are the Tempus project to create the continuing education center at Tallinn Technical University, the Grundtvig project to create individualized pathways Equipe and the project DAETE to develop accreditation methods for continuing education. He was invited professor of Loughborough University, UK in 1997 and 1998, University of Barcelona, Spain in 1994, 1995 and 1996, Polytechnic University of Cataluna, Spain in 2001, Technical University of Vienna, Austria in 2006, 2007 and 2009 in Innovation in Elearning and Visiting Scholar at the Institute of Higher Education, University of Georgia, Athens, USA in 2006 for three months.

Dr. Soeirohas been vice-president and president of the European Society of Engineering Education; he is a member of the board of the European Journal of Engineering Education since 2001; he is one of the two guest editors of the joint edition of EJEE and the Journal of Engineering Education in 2007. Dr. Soeiro has helped the creation of the center of elearning in the University of Porto between 1999 and 2002 including the edition of continuing education

courses in cooperation with other European universities; has coordinated and participated in several European projects in the areas of distance learning and elearning; has authored the second ebook in engineering of the University of Porto with the support of a portal; has authored and coordinated an ebook on construction safety that has been supported by the International Labour Organization. He is the representative of Ordem dos Engenheiros, vice-chair of the European Monitoring Committee of FEANI and chair of the OMP. He was awarded the International Hall of Fame in Adult and Continuing Education title in 2006 and received the award of EDEN Fellow in 2008. Dr. Soeiro received the IACEE Fellow award in 2014. He coordinated some European funded projects Atelcoma (1998), Equipe (2004), Daete (2006), Virqual (2009) and TALOE. He is also member of the reviewers of Campbell Award (2010/2012/2014). He was also a partner in several European funded projects like DIALOGUE, Community Service Engineer and VMCOLAB.

11:55 - 12:20 (Wednesday)



**Dr. Rosemary Seva**Dean of Gokongwei College of Engineering
De La Salle University (DLSU)
Manila, Philippines

Rosemary Seva is a Professor of Industrial Engineering and former Dean at the Gokongwei College of Engineering - De La Salle University, Philippines. She is the current President of the Human Factors and Ergonomics Society of the Philippines (HFESP) and the past President of the Southeast Asian Network of Ergonomics Societies (SEANES). She is one of the Top 150 scholars and scientists in the Philippines from Webometrics. She obtained her doctorate degree at the Nanyang Technological University (Singapore). She has two master's degrees: one in Ergonomics from the University of New South Wales (Australia) and in Industrial Engineering from De La Salle University. She is an ASEAN Engineer and a Professional Industrial Engineer. She has published a number of journal articles on affective design,

safety, and usability studies. Her works appear in Applied Ergonomics and International Journal of Industrial Ergonomics.

12:20 - 12:45 (Wednesday)



Dr. Asela K. Kulatunga

Senior Lecturer Department of Production Engineering Faculty of Engineering University of Peradeniya Sri Lanka

#### "Industrial Engineering Education in Sri Lanka"

Dr. Asela K. Kulatunga currently work as a Post-doctoral Research Fellow at University of Bremen, Germany. He has been serving as a Lecturer since 2007 at the Department of Production Engineering, University of Peradeniya, Sri Lanka and later promoted to Senior Lecturer in 2013. He conducts courses on Industrial Engineering, LEAN Manufacturing, Sustainable Manufacturing and Operations Management in bachelors and Masters Level in

University of Peradeniya and some other universities. He holds a doctoral degree in Industrial Engineering from University of Technology, Sydney, Australia and a Bachelor's degree in Production Engineering form University of Peradeniya, Sri Lanka.

Dr. A.K. Kulatunga has served the scientific community by publishing more than fifty publications in leading peer-reviewed international conferences and journals and several books/ book chapters in the areas of Industrial Engineering, LEAN Manufacturing, Sustainable Manufacturing and Operations Management. In addition, he has served as a co-drafter for O-LCA, for UNEP/SETAC Life Cycle Initiative and severed in some UNIDO projects in Sri Lanka. Meanwhile, he has been underwriting the manufacturing industry as an Engineering Consultant for several local manufacturing firms. Besides his academic and industrial involvements he is credited for his valuable contribution to the society through various societal activities. Recently he has been elected as the country representative for IEOM Society in Sri Lanka. Further he holds professional memberships in IEEE, IEOM, ERSCP and IESL.

Session VI: Global Engineering Education 2:30 – 3:45 am (Wednesday) - Room Starhill 4 Session Chair: Dr. Eldon Caldwell, University of Costa Rica

2:30 - 2:55 (Wednesday)



Dr. Md. Mizanur Rahman
Senior Lecturer
Department of Thermo Fluids
Faculty of Mechanical Engineering
University Technology Malaysia (UTM)
Skudai, Johor Bahru, Malaysia

Engineering education in energy technology: paradigm shift from technology-centred to multidisciplinary focused

**Bio: Md. Mizanur Rahman** is currently a Senior Lecturer at Department of Thermo-Fluids, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia UTM, Johor Bahru, Malaysia. Before joining at UTM, he has served as a Postdoctoral Researcher at Aalto University School of Engineering, Finland. Rahman also has more than 12-year working

experience in a government statutory body namely Rural Electrification Board (REB), Bangladesh. During his tenure in REB, Dr. Rahman has gathered practical experience in dealing with techno-economic and sociocultural challenges faced by rural electrification programme. He has accumulated deep insights towards the solution pathways for the Global Mega-challenge of having 1.2 billion people without access to electricity yet. Mr. Rahman has sound understanding into the global energy sector challenges and its societal implications. Mr. Rahman received his Ph.D. in Energy Economics and Power plant

Engineering from Aalto University, Finland, M.Sc. in Sustainable Energy Engineering from Royal Institute of Technology KTH, Sweden, and B.Sc. in Mechanical Engineering from Khulna University of Engineering and Technology, Bangladesh. His research interests include rural electrification, energy economics, energy management, energy efficiency and system, sustainable and renewable energy, energy system modelling, Life-Cycle Analysis, distributed power generation, multicriteria evaluation etc. Dr. Rahman has several publications in International referred journals in energy engineering domain.

2:55 - 3:20 (Wednesday)



Dr. Eldon Caldwell
Director, Industrial Engineering Department
Engineering School
University of Costa Rica

Using Robotics as Educational Framework Strategy in Industrial Engineering

**Abstract:** Industrial engineering evolve, as formal science and as practice, in a world experiencing a faster technological revolution that gave birth to the late nineteenth century. The "core study object" of this discipline is still what I call "the complex production system"; which is present in contexts as diverse as the services sector, the goods producing sector, government organizations and public and private social organizations. One of the main features of these new complex production systems, is undoubtedly cognitive ability in dynamic and chaotic environments so robotic applications appear

as a technological factor. Analyzing the experience at the University of Costa Rica, this conference focuses on how robotics can be used to address collaborative learning, learning through projects and also developing teamwork skills, cognitive skills of abstract conceptualization, computer programming skills and design skills in concurrent environments. Implementing some changes in the curriculum and the didactic strategies, robotics give more pedagogical benefits when we use their principles in order to develop a "pragmatic, statistic, strategic, systemic and frugal" thinking. A preliminary model is presented in this lecture.

**Bio:** Eldon Caldwell, is full professor/ Cathedraticus of the University of Costa Rica, Central America; Doctor (Ph.D.) in Industrial Engineering major in *Lean Operations Engineering*. He developed new heuristic sequencing algorithms in order to reduce cycle times and received *Suma Cum Laude* in his doctoral dissertation and Academic Crown Excellence Award in Autonomous University of Central America/ University of Nevada, USA. Currently, he is doctoral researcher at the (Dr. Sc.) Computing Science Program at the University of Alicante, Spain and doctoral researcher at the Dr. Ed. Program at University of Costa Rica, receiving the Academic Excellence Award 2013.

Dr. Caldwellis "Lean Systems Certificated Specialist", MAPV-University of Nevada, USA, ASQ-Six Sigma Black Belt Certified Trainer, and Spanish publications technical reviewer of Gary Conner, 2002 Shingo Prized. Also, Dr. Caldwell has been recognized by the IEOM Society with the "Outstanding Service Award" for his career of over 25 years as an educator, researcher and promoter of development of industrial engineering. Dr. Caldwell earn his B.Sc. and Master degree in Industrial Engineering at University of Costa Rica (Summa Cum Laude) and he earn a Master degree in Service Marketing, as well in Financial Analysis at Interamerican University of Puerto Rico (Costa Rica); M.Sc. Health Management Systems at UNED, Costa Rica and a M.Sc. Operations Management at ITESM, México. He is author of many scientific articles and two books: "Marketing of Social Products and Services", UCR Pub. and "Lean Manufacturing: Fundamentals and techniques for cycle time reduction", Kaikaku Institute Press, USA.

Dr. Caldwell served as Operations Manager at MASECA, CA; Lean Manufacturing Project Manager at Eaton Corp. Costa Rica, General Manager at Quirós & Cía-Bandag Inc. and General Manager at Lean Systems Intl., USA. He has 25 years of experience as advisor and consultant in Operations Management, Lean Manufacturing and Lean Logistics at Interamerican Bank for Development, WHO, UN, World Wide Bank, Coca-Cola, Ministry of Health, Costa Rica, Honduras, Panamá, Costa Rican Institute for Electricity, RTC- Perú, Young Electrical Signs, Nevada, USA, AirCare Inc., Reno, Nevada, Plan International-Honduras, and many others. Currently, Dr. Caldwell is Director of Industrial Engineering Department at Engineering School of University of Costa Rica.

3:20 - 3:45 (Wednesday)



Dr. Pal Pandi Ammavasi, M.E., Ph.D (Engg)., MBA., Ph.D (Mgmt) Associate Professor Bharath Niketan Engineering College Aundipatty, Tamilnadu, India

**Dr.** A. Pal Pandi is working as an Associate Professor in Bharath Niketan Engineering College, Aundipatty, Tamilnadu, India. He has seventeen years of experience in both academic and industry streams. He has published more than 26 papers in International and National journals including Inderscience, Elsevier and Taylor and Francis. He has published 45 papers in proceedings of international and national conferences held across India. He has a wide range of expertise and knowledge in Mechanical Engineering as well as Management sciences. He holds doctorate degree in both Faculty of Management Sciences and Mechanical Engineering. He also reviewer for some reputed international journals. His area of research is total quality management, quality engineering and manufacturing management. Seven scholars are pursuing research programme under his guidance.

# Session V: Panel Session - Global Engineering Education 4:00 – 5:15 pm (Wednesday) - Room Starhill 4

Panel Chair: Dr. Abu Masud, Wichita State University, Kansas, USA

#### **Panelists**



**Dr. Abu Masud, P.E.**Boeing Global Engineering Professor
Professor of Industrial and Manufacturing Engineering
Wichita State University, Kansas, USA

**Bio:** Dr. Abu Masud is a professor of industrial and manufacturing engineering at Wichita State University. He has been named the Boeing Global Engineering Professor at Wichita State University. In this new post, Dr. Masud is expected to advance the College of Engineering's strategic alliances for global enrichment and experiential learning of students as well as international research collaborations and partnerships. He received Duane and Velma Wallace Outstanding Educator Award from WSU College of Engineering. Previously he was held various positions at Wichita State including associate dean, graduate school (2008-2013), coordinator, college ABET affairs (2006-2008), associate dean, college of

engineering (2004-2005), chair, industrial and manufacturing engineering department (1994-2004) and graduate coordinator of IME (1991-94, 1996-98, 2001-2004). Dr. Masud has engaged with various companies and governmental research centers including NASA Langley Research Center, VA, NASA/ASEE Summer Faculty Fellow (1991 and 1992), Boeing, Consulting Analyst, and Kuwait Institute for Scientific Research. He is member of Accreditation Review Council (2011-2014). Dr. Masud published book, book chapters, and numerous journal and conference papers. He is registered Professional Engineer at Kansas State. Dr. Masud is an IIE fellow. He received Ph.D. and M.S. in Industrial Engineering from Kansas State University, and B.S. in Mechanical Engineering from Bangladesh University of Engineering & Technology.



Dr. Hans-Juergen Hoyer

Secretary General of the International Federation for Engineering Education Societies (IFEES) Executive Secretary of the Global Engineering Deans Council (GEDC) Resident Scholar in Global Engineering at Marquette University

Hans J. Hoyer is the Secretary General of the International Federation for Engineering Education Societies (IFEES), Executive Secretary of the Global Engineering Deans Council (GEDC), and Resident Scholar in Global Engineering at Marquette University. Former Director of International Programs and Strategy for the American Society for Engineering Education (ASEE) and co-founder of the Indo-US Collaborative for Engineering Education (IUCEE). Prior to 2006, Hans J. Hoyer was CEO of World Links, a spin-off of the World Bank. In this capacity, he worked globally on issues related to secondary education, teachers' education, and on-line collaborative learning focusing on science and social studies among

high school students across the globe.



**Dr. Funso Falade**Department of Civil & Environmental Engineering
University of Lagos, Akoka, Lagos, Nigeria
and
President, African Engineering Education Association

**Bio:** Falade Funso Alphonsus is a Nigerian and a Professor of civil engineering at University of Lagos, Nigeria. He earned Diploma in Quantity Surveying at Yaba College of Technology, Nigeria, in 1978. He completed his M.Sc (Civil Engineering) at the Moscow Institute of Civil Engineering in the USSR in 1984 and obtained PhD in Civil Engineering, from University of Lagos in 1998. Prof. Falade has authored over 70 articles on innovative construction materials and engineering education published in locally and internationally reputable journals as well as in proceedings of learned

conferences. He has also made contributions to two (2) textbooks. In February, 2014, he made public presentation of a book titled 'Strengthening of Distressed Buildings'. He has researched into the structural properties of bamboo and developed the technology for its successful incorporation as replacement of steel reinforcement in some structural elements. He has also researched extensively on Foamed Aerated Concrete. Prof. Falade has presented over 45 papers at workshops and seminars on such topics as Project Management, Quality Control, Maintenance of Facilities, and Contract Procurement Processes etc.

Prof. Falade is a member of some professional bodies both locally and internationally, including Fellow, The Nigerian Academy of Engineering, Fellow, Nigerian Society of Engineers, Fellow, African Engineering Education Association, Registered Engineers, Council for the Regulation of Engineering in Nigeria etc. He is a promoter of engineering education. He was the initiator of African Regional Conference on Engineering Education and the Chairman, Organizing Committee and the Editor of the Proceedings of the 1<sup>st</sup>, 2<sup>nd</sup> and 5<sup>th</sup> African Regional Conference on Engineering Education that were held at University of Lagos in 23<sup>rd</sup> – 25<sup>th</sup> September, 2002, 20<sup>th</sup> – 22<sup>nd</sup> September, 2004 and 9<sup>th</sup> -12<sup>th</sup> September, 2013 respectively. He is the President of the African Engineering Education Association (AEEA) and former Vice-President, international Federation of Engineering Education Societies (2009-20012). He was appointed UNESCO Consultant in 2005.



**Hulas King**Director, Diversity, Professional Affiliations & Global Community Relations Siemens PLM Software
St. Louis, Missouri, USA

Hulas is responsible for the strategy and operational leadership of Siemens PLM Software Global Diversity Council. He also leads Professional Affiliations & Global Community Relations Teams, driving innovation and digitalization value for youth, displaced workers, strategic customers and business partners. Mr. King is a decorated Vietnam veteran, a Certified Manufacturing Engineer and a Certified NC Manager. He was inducted into the African-American Biographies Hall of Fame for outstanding contributions in Business and Engineering. He represents SIEMENS on several professional boards including the Institute of Industrial Engineers, the Society of Manufacturing Engineers, Advancing Minorities' Interest in

Engineering, the Stone Soup Foundation, the Accreditation Board for Engineering & Technology (ABET), the International Federation of Engineering Education Societies (IFEES) and the Professional Business Leadership Council. He travels extensively within the Americas, Europe, the Middle East and Asia Pacific, speaking at various technical seminars in support of Global Opportunities in PLM.

Hulas managed the GO PLM (Global Opportunities in Product Lifecycle Management) program, nurturing strategic partnerships that provide significant added value for academic institutions, youth development programs and our global communities. These partnerships exemplify SIEMENS as the PLM Industry Leader and are successful in developing technology environments where underutilized citizens of the world can work together to improve their economic conditions and promote peace. He served as McDonnell-Douglas' Program Manager for Enterprise Life-Cycle Processes for Team Columbus Engineering / Manufacturing in support of C-17 Production in Columbus, OH.

#### Education

- \* Belleville Area College, 1970: AS, Data Processing
- \* Southern Illinois University, Edwardsville, 1972: BS, Management Science/Data Processing
- \* Southern Illinois University, Edwardsville, 1974: MBA, Marketing and Business Administration
- \* Southern Illinois University, Edwardsville, 1975: MS, Government/International Relations.
- \* Southern Illinois University, Edwardsville, 1978: MS, Management Science and Systems
- \* Southern Illinois University, Edwardsville, 1979: SPC, Health Care Management Systems
- \* University of Missouri Columbia, 1983: MS, Industrial Engineering

# Thursday (March 10, 2016)

Session IX: Global Engineering Education 8:00 – 9:15 am (Thursday) - Room Starhill 4

Session Chair: Dr. Khairiyah Mohd Yusof, Universiti Teknologi Malaysia

8:00 – 8:25 (Thursday)

Khairiyah Mohd Yusof, PhD

Director, Centre for Engineering Education (CEE)
Universiti Teknologi Malaysia
Johor Bahru, Malaysia



Dr. Khairiyah Mohd-Yusof is the Director of Universiti Teknologi Malaysia (UTM) Centre of Engineering Education (CEE), promoting meaningful research and scholarly practices in engineering education and managing the PhD in Engineering Education program. She obtained her PhD in Chemical Engineering for the University of Waterloo, Canada. Prior to becoming the Director of CEE, she was the Deputy Director at the Centre for Teaching & Learning (2008 -2011), and Head of the Chemical Engineering Department (2006-2008). An Associate Professor in the Department of Chemical Engineering, Dr. Khairiyah is regularly invited as a speaker in various conferences and workshops in Asia, Europe and North America. She conducts research and receives funding for her work in engineering education, and dynamic process modeling and control. Dr. Khairiyah has also won several awards, including the Diamond Award for Best Paper at the 2005 UNESCO International Centre of Engineering Education Asia Pacific Conference on Engineering Education in Bangkok, Thailand, the Best Paper Award at the 2011 IEEE Global Engineering Education Conference in Amman, Jordan, the 2013 Institution of Chemical Engineers Malaysia Award for Education and Training and the Best of the Best Award at the 2014 Innovative Practices in Higher Education Exposition in Johor Bahru, Malaysia. Currently, Dr. Khairiyah is an Editor for the ASEAN Journal of Engineering Education, an Associate Editor for the Journal of Engineering Education, and is in the Editorial Board for the Journal of Problem Based Learning in Higher Education and the IChemE Education for Chemical Engineers Journal. She is also a Master Trainer for the Higher Education Leadership Academy (AKEPT) under the Malaysian Ministry of Education, the Secretary for the Society of Engineering Education Malaysia (SEEM), and board member representing Asia for the Research in Engineering

Education Network (REEN). Dr. Khairiyah had chaired and organized various Engineering Education Conferences in Malaysia, including the 2013 International Research Symposium on PBL in collaboration with the Aalborg University UNESCO Chair on PBL in Engineering Education and AKEPT, and the 2013 Research in Engineering Education Symposium in collaboration with REEN, AKEPT and SEEM.

8:25 - 8:50 (Thursday)



Dr. Amar Partap Singh Pharwaha
Professor
Department of Electronics & Communication Engineering
Sant Longowal Institute of Engineering & Technology (SLIET)-Deemed University
Longowal, Sangrur, Punjab, India

#### Virtual Instrument for Monitoring Process Parameters: A Versatie Tool for Engineering Education

Abstract - With the advent of interactive multimedia programming languages and the world-wide-web (www), it has now become possible to build virtual laboratories that can be accessed globally. Virtual laboratory facilitates to offer experiment-oriented problems without the overhead incurred when establishing a complete hardware-based laboratory. Based on these considerations, the present work reports the development of a new type of Virtual Instrument (VI) for

monitoring process parameters, which may also be used as an educational tool. The proposed VI is designed using fourth generation object-oriented programming technology. The executed user-interactive VI fulfills the requirements of efficient data acquisition, management and presentation. It is designed as an integrated system using five different virtual instruments. Each of the five virtual instruments was designed as an independent standalone system to serve a particular application. These dedicated virtual instruments were examined independently for their performance. Ultimately, these VIs were integrated to synthesize the proposed VI for versatile applications of transducer modeling including estimation of static-nonlinearity of transducers, transducer linearization, self-compensation in transducers and fault detection in transducers based systems. Such applications are required frequently in Data Acquisition System (DAS) connected Transducers in computer based instrumentation.

BIO: Dr. Amar Partap Singh, was born in Sangrur, Punjab in 1967 & received his B. Tech. (Electronics Engineering) in 1990 from Guru Nanak Dev University, Amritsar, M. Tech. (Instrumentation) in 1994 from Regional Engineering College (now NIT), Kurukshetra & Ph.D. on Intelligent Instrumentation in 2005. Presently, he is Professor (Electronics & Communication Engineering) and Part-time Chief Vigilance Officer (appointed by Govt. of India) at Sant Longowal Institute of Engineering & Technology (SLIET-Deemed University, established by Govt. of India), Longowal. Dr. Singh is credited with a professional experience of more than 24 years including the position of Research & Development Engineer, Dean (Student & Faculty Welfare), Dean (Planning & Development), Head (Department of Electronics & Communication Engineering), Head (Department of Electrical & Instrumentation Engineering) and Professor & Joint Director at Yadavindra College of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo. He has guided seven Ph. D. Theses and six more are under his supervision for Ph.D. degrees. He preferred to remain active in his passion for research teaching instead of joining to the Post of Director, Punjab University Regional Center, Hoshiarpur, for which he was also selected in 2008. He has published more than 170 Research Papers in various National & International Journals/Conferences and received various awards including IETE Students Journal Award-2006 by Institution of Electronics and Telecommunication Engineers, New Delhi, Certificate of Merit by the Institution of Engineers (India) in 2006, KF Antia Award by the Institution of Engineers (India) in 2009, Sir Thomas Ward Award by the Institution of Engineers (India) in 2010 & again KF Antia Award by the Institution of Engineers (India) in 2014. Dr. Singh has the honour of being elected for the third time as member of the State Committee of Institution of Engineers (India), Punjab & Chandigarh State Centre. He is a Fellow of Institution of Engineers (India) as well as Institution of Electronics & Telecommunication Engineers. He is also the Life Member of Punjab Academy of Sciences, Instrument Society of India, Metrology Society of India, Indian Society for Technical Education & International Association of Engineers (Hong Kong). He has visited a number of countries including US, UK, France, Australia, Singapore & Pakistan.

8:50 - 9:15 (Thursday)



**Dr. Funso Falade**Department of Civil & Environmental Engineering
University of Lagos, Akoka, Lagos, Nigeria
and
President, African Engineering Education Association

Session X: Global Engineering Education 11:30 am – 12:45 pm (Thursday) - Room Starhill 4

Session Chair: Dr. S. C. Naik, National Institute of Technology, Rourkela, Odisha, India

11:30 - 11:55 (Thursday)



**Kamel Hawwash**, BSc, MSc, MAPM, FHEA Professor in the School of Civil Engineering Univeristy of Birmingham, UK Immediate Past President of SEFI Member of the European Engineering Deans Council

Kamel Hawwash is Professor in the School of Civil Engineering and Immediate President of the European Society for Engineering Education, SEFI. He is the Convenor of the long-established MSc Construction Management Programme. He was Head of the School of Civil Engineering from 2008 to 2011. Between 2009 and 2012 he was the Regional Director for the Midlands and East Anglia for the National HE STEM Programme.

Professor Hawwash is past Chair of the Association of Civil Engineering Departments, and member of the Engineering Education, Employability and Skills sub-committee of the Engineering Professors' Council and Associate of the Engineering Council, UK.

He is a Fellow of the Higher Education Academy and a Member of the Association of Project Management. Professor Hawwash received MSc in Civil Engineering from UMIST in 1987 and BSc (Hons) in Civil Engineering from UMIST in 1985.

11:55 - 12:20 (Thursday)



**Dr. Charles Mbohwa**Professor and Vice-Dean Postgraduate Studies, Research and Innovation Faculty of Engineering and the Built Environment (FEBE)
University of Johannesburg's (UJ)
South Africa

**Bio:** Professor Charles Mbohwa is the Vice-Dean Postgraduate Studies, Research and Innovation at University of Johannesburg's (UJ) Faculty of Engineering and the Built Environment (FEBE). As an established researcher and professor in the field of sustainability engineering and energy, his specializations include sustainable engineering, energy systems, life cycle assessment and bio-energy/fuel feasibility and sustainability with general research interests in renewable energies and sustainability issues. Professor Mbohwa has presented at numerous conferences and published more than 150 papers in peer-reviewed journals and conferences, 6 book chapters and one book. Upon graduating with his B.Sc. Honors in Mechanical

Engineering from the University of Zimbabwe in 1986, he was employed as a mechanical engineer by the National Railways of Zimbabwe. He holds a Masters in Operations Management and Manufacturing Systems from University of Nottingham and completed his doctoral studies at Tokyo Metropolitan Institute of Technology in Japan. Prof Mbohwa was a Fulbright Scholar visiting the Supply Chain and Logistics Institute at the School of Industrial and Systems Engineering, Georgia Institute of Technology, is a fellow of the Zimbabwean Institution of Engineers and is a registered mechanical engineer with the Engineering Council of Zimbabwe. He has been a collaborator to the United Nations Environment Programme, and Visiting Exchange Professor at Universidade Tecnológica Federal do Paraná. He has also visited many countries on research and training engagements including the United Kingdom, Japan, German, France, the USA, Brazil, Sweden, Ghana, Nigeria, Kenya, Tanzania, Malawi, Mauritius, Austria, the Netherlands, Uganda, Namibia and Australia.

12:20 - 12:45 (Thursday)



Dr. S. C. Naik

Professor, Former Head of Chem Engg and Dean

National Institute of Technology, Rourkela, Odisha, India

Past President, The Institution of Engineers

Past Vice-President, The Federation of Engineering Institutions in South & Central Asia

"Engineering Education and Environment"

Professor S C Naik obtained his BTech, MS & PhD degrees-all in Chemical Engineering from the Universities of Madras, Ottawa and UK (Swansea, Wales) respectively. He taught at the National Institute of Technology, Odisha State, India where Dr. Naik was Head of the Department and Dean. He guided many Research Fellows, some medium scale Industries and helped in establishment of an Engineering College. Dr. Naik authored/co-authored some books, published many papers in International and National Journals and presented papers in several countries. He was a Keynote Speaker at the Technical Events in Sri Lanka, South Korea, some Gulf countries, Naples, Tokyo and San Francisco in 2006. Dr. Naik was a Consultant to a prestigious Journal.

Dr. Naik was a President of The Indian Institution of Engineers, one of the largest professional bodies in the world, a Vice President of The Federation of Engineering Institutions of South & Central Asia and a Council Member of The Indian Institute of Chemical Engineers. He is a well-known writer in his own mother tongue, Odiya and has published several social novels, a book with one hundred poems and several articles for which he has been felicitated by his State Literature Academy and his name has found place in Central Literature Academy. Dr. Naik is associated with many Committees at the State and Central levels. Professor Naik has a deep involvement in social service for which he has been even appreciated by a world-based organization. For his achievements, he has been awarded and appreciated by Regional, State, Central and Global organizations.

Session XI: Global Engineering Education 2:30 – 3:45 pm (Thursday) - Room Starhill 4 Session Chair: Dr. Hamid Parsaei, Texas A&M University

2:30 - 2:55 (Thursday)



Professor Khedidja ALLIA
Research Laboratory of Science in Industrial Process Engineering (LSGPI)
USTHB - FGMGP, Bâb-Ezzouar
Algiers- Algeria

Khedidja Allia is a Chemical Engineering Professor and research director at the University of Sciences and Technology (USTHB), Algiers. Sheholds engineer diploma and Doctorate Es Science in Chemical Engineering at National Polytechnic School, Algiers (ENP) and part at Thames Polytechnic – London-UK. She is engaged in the supervision of students at different levels (Doctorates, Magisters, masters), and lectured at the USTHB (Algiers) and she is member of Scientific committee of the faculty. Pr Khedidja Allia published several scientific works in the fields of chemical and environmental engineering (Multiphase flow, Pneumatic conveying, fluidization, semi fluidization and wastewater treatment, solid wastes,

...), and has been and is involved with a number of research projects and was a Fulbright Researcher at Mechanical department and Aerospace

Engineering, Cornell University, Ithaca, New .York, USA. She occupied several posts as; Director of Higher Education (MESRS), Director of Industrial chemistry institute USTHB and President of Scientific Committee - Industrial Chemistry institute, Head of Chemical Engineering Department at the National Polytechnic school of Algiers (E.N.P), and Researcher at Research and Development Direction at SONATRACH. She took part at many commissions on the higher education reforms, and she was the National Coordinator of « the higher education Commission (Technology) of "Maghreb Equivalence", and president of PURAQ (Pôle Universitaire et de recherché Algéro-Québécois). For her achievements, she has been awarded and appreciated by State and Global Institutions.

2:55 - 3:20 (Thursday)

Shri. Mahesh Anant Kakade, MIE, MISTE, MIV, MIEEES Controller of Examinations, Shivaji University, Kolhapur Chairman, Indian Society for Technical Education Maharashtra- Goa Section, India

3:20 - 3:45 (Thursday)



### Dr. Hamid Parsaei, PE

Professor of Industrial and Systems Engineering Texas A&M University (College Station) and Professor of Mechanical Engineering and Director of Academic Outreach Texas A&M University Qatar

Bio: Hamid R. Parsaei is Professor of Industrial and Systems Engineering at Texas A&M University (College Station) and also Professor of Mechanical Engineering and Associate Dean for Academic Affairs at Texas A&M University at Qatar. He is a registered professional engineer (PE) in Texas, a Fellow of the Institute of Industrial Engineers (IIE), and a Fellow of the American Society for Engineering Education (ASEE). He has published over 200 articles in peer-refereed archival journals and conference proceedings. He has also served as editor/co-editor in chief for four academic journals and five book series. His research, in excess of \$22 million, has been funded by numerous government and private institutions.

# Session XII: Global Engineering Education 4:00 – 5:15 pm (Thursday) - Room Starhill 4

Session Chair: Nidhi M B, MarBaselios College of Engineering & Technology (MBCET), Thiruvananthapuram, Kerala, India

4:00 - 4:25 (Thursday)



Nidhi M B

A/HoD Mechanical Engineering Department MarBaselios College of Engineering & Technology (MBCET) Thiruvananthapuram, Kerala, India National Executive Council Member ISTE

#### **Enhancing outcome Based Education through Self awareness**

Prof. Nidhi M B is currently working as Assistant Head of dept. Mechanical Engineering Dept. of Mar Baselios College of Engineering and Technology, Trivandrum, Kerala. She is also in the capacity of National Executive Council Member of ISTE (Indian Society for Technical education) (2015-2018) and joint Secretary to IIIE (Indian Institution of Industrial Engineers, Kerala chapter) (2011-2012, 2014-2015, 2015-2016). She has being serving as State Management Committee Member ISTE Kerala section from 2012-2015. Apart from the above responsibilities she has consistently initiated the release of Kerala Section Newsletter for the last 5 years, in the capacity as Newsletter Editor. She has gained appreciation by the Kerala Section for the efforts to promote ISTE. She has been instrumental in bridging the Industry Academia Gaps,

and she is co-coordinating 5 projects with industry apart from current teaching responsibilities on the interest of the Institution. Ms Nidhi MB has been a special invitee to GEDC (Global Engineering Deans Council Summit), Singapore. She has been instrumental in initiating ISTE Faculty and Student Chapters in MBCET and currently the Chairman of ISTE-MBCET Chapter. Under her leadership the ISTE Chapter has organised many events for the benefit of students and Faculty. The Chapter has won 5 awards within the short span of 2.5 years. She has delivered many Keynotes addresses and Invited Lectures at State, National and International forums. She has to her credit 26 papers in National, International Journals and Conferences of which 8 papers are in education research. She is also reviewer of journals and conferences in areas relating to Sustainability in Engineering, Supply Chain Management, Engineering & Technology trends in Mechanical Engineering, etc. Her areas of interest include Pedagogy and Training, Outcome Based Education, Changing roles of Industrial Engineering, Design and Engineering, Green Supply Chain Management etc.

She graduated from the SCT College of Engineering in BTech Mechanical Production in the year 2001. She worked in Industry Leela Lace International Ltd, as Industrial Engineer for 3 years. There by developing a passion for Industrial Engineering, she pursued her Master's Degree in Industrial Engineering from CET, Kerala, (2006-2008). Since then she started her career in Engineering Education as lecturer, Sr Lecturer and as Asst. Prof with Saintgits College and Mar Baselios College of Engineering and Technology. She has also won many Best Paper Awards in various forums of International conferences and National Conventions. She is also serving as mentor to other ISTE chapters in Kerala. She is currently pursuing her research at the National Institute of Technology Calicut on Sustainability.

4:25 - 4:50 (Thursday)



Dr. P. Muredzi
Dean – School of Engineering & Technology
Harare Institute of Technology
Zimbabwe

Perkins Muredzi is currently the Executive Dean of the School of Industrial Sciences and Technology and School of Engineering and Technology at the Harare Institute of Technology, Harare, Zimbabwe and a 2015 Global CIMA Award winner in "education Leadership" conferred at the 2015 World Education Congress, Mumbai, India. He graduated with a BSc, MSc in Food Processing Engineering from Krasnodar Institute in the Russian Federation in 1991 and obtained a Master's degree in Intellectual Property from Africa University in 2009 before attainment of his PhD qualification. Dr Muredzi teaches Food Engineering in undergraduate, certificate and diploma programmes and also teaches Intellectual Property in the Master of Intellectual Property degree programme being run jointly by Africa University, the World Intellectual Property Organisation (WIPO) and the African Intellectual Property Organisation (ARIPO) He has published 8 books, his first being one published by CBH publishers (USA) entitled "Emerging Non-Thermal Food Processing Technologies" and two of which are text books for "A" Level Food

Science and a text book for postgraduate students studying Food Science and Technology. He is a member of ZEC (Zimbabwe Energy Council) IUFost, EFFoST, IFT (USA) and sits in various national bodies like the Research Council of Zimbabwe grants committee, symposium organising committee, the Harare Polytechnic B Tech Programme Board of studies, NAMACO sectorial committee on Food Processing, ZIMCHE's RIE-SET organising committee, Zimbabwe Intellectual Property Development Trust and various SAZ standards development technical committees among others. He is the current chairman of the research board and member of the editorial committee of the Journal of Science, Technology, and Technopreneurship (JSTT) of the Harare Institute of Technology. Dr.Muredzi currently sits on Editorial Boards of the following Journals:

- Journal of Biological, Pharmaceutical and Chemical Research
- Journal of Leadership and Management Studies; Department of Management and Project Management; Cape Peninsula University of Technology
- International Journal of Science, Technology, and Society.
- American Journal of Nutrition and Food Science

4:50 – 5:15 (Thursday) OPEN

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Dr. Ahad Ali, Lawrence Technological University, Southfield, Michigan, USA Professor Dr. Abdul Talib Bon, Universiti Tun Hussein Onn Malaysia, Johor, Malaysia

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Masaru Tezuka, Hitachi Solutions East Japan, Ltd., Japan

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Resh Plaha, Crystal Quality, UK

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Ahmed Al Jabr, President - IEOM Saudi Chapter

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Christian Forrest, Manager of Web Services, Lawrence Technological University, Michigan, USA Suvro Sudip, Undergraduate Student at Lawrence Technological University, Michigan, USA

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- Dr. Hamidi Bashir, Chairperson, Department of Industrial and Engineering Management, University of Sharjah, UAE
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- Dr. Hamid R. Parsaei, Associate Dean for Academic Affairs, Texas A&M University at Qatar and Professor of Industrial and Systems Engineering, Texas A&M University
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Dr. Norizah Mohamad, Universiti Sains Malaysia, Engineering Campus, Pulau Pinang, Malaysia

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Abroon Qazi, Department of Management Science, Strathclyde Business School, University of Strathclyde, Glasgow, UK
Wan Nuraini Rahim, Universiti Teknologi MARA, Malaysia
Umol Syamsyul Rakiman Universiti Tun Hussein Onn Malaysia

# **IEOM Women in Industry and Academia Forum**



Ms. Resh Plaha Crystal Quality, UK Chair

**Committee Members** 

Aamenah Bashir

BSc. Computer Engineering, MSc. Engineering Systems Management, ITIL Certified IT Specialist Office of Academic Computing American University of Sharjah United Arab Emirates (UAE)



Dr. Chan Chee-Ming
Associate Professor and Deputy
Dean (Academic and Research)
Universiti Tun Hussein Onn
Malaysia
Johor, Malaysia



**Dr. Ilham Kissani**Faulty of Engineering &
Management Science
Al Akhawayn University
Ifrane, Morocco



**Dr. Mey Goh**Associate Professor in Product
Design
Loughborough University, UK





**Dr. Stefanie Pillai**Dean and Associate Professor
Faculty of Languages & Linguistics
University of Malaya
Kuala Lumpur, Malaysia



Dr. Adibah Shuib Head of Strategic Planning (Monitoring) Centre for Strategic Planning Universiti Teknologi MARA (UiTM)



**Dr. Vanajah Siva** Chalmers University Sweden



Vanessa Victoire University of Mauritius Mauritius



Prof. Soumaya Yacout École Polytechnique de Montréal Canada

# **IEOM Industry Solutions**

JW Marriott Kuala Lumpur Hotel March 8 – 10, 2016

IEOM Industry Solutions sessions will showcase the industrial case studies and their impacts of the industrial solutions using IE / OM tools and techniques (lean, six sigma, FMEA, simulation, design of experiments, optimization, TOC, PLM, CAE, statistical analysis, etc.) IEOM 2015 Dubai Conference will have a dedicated session for the Industry Solutions where distinguished practitioners provide their presentations including their experiences and journey to be successful. Thirty six featured speakers will be from various part of the world to address industrial challenges and opportunities for continuous improvement and sustainability.

#### **IEOM Industry Solutions Chairs**

Majid Abab, The Boeing Company, USA Masaru Tezuka, Hitachi Solutions East Japan, Ltd., Japan

# **Distinguished Industry Speakers**

# Tuesday, March 8, 2016

Session I: Industry Solutions - Room - Starhill 4 8:00 - 9:15 (Tuesday)

Chair: Dr. Ari Maunuksela, TEAK Ltd., Teuva, Finland

08:00 - 08:25 (Tuesday)



Ali Massaeli National Iranian Gas Company Tehran, Iran

ID 267 Developing Productivity Monitoring System in a governmental organization with multi-performance objectives: A case study in National Iranian Gas Company

Ali Massaeli Ali is a Senior Expert in Industrial Inspection Department of National Iranian Gas Company, Tehran- I.R. of IRAN. He earned B.Sc. in Chemical Engineering from Azad University of South Tehran; M.Sc. in Industrial Engineering – System Management and Productivity from Azad University of Qazvin. He has several research activities such as publishing internal journal of IGU (International Gas Union) and international conference papers. He has several industrial training courses in Chem. and Industrial Engineering and co- authoring and the editor of process

engineering in oil and gas industry. He was one of the senior experts in SCOE integrating executive committee of Petroleum Ministry of I.R. of IRAN. In the IEOM 2012(Istanbul-Turkey) he received Outstanding Industry Awards. He is one of the members Industrial Committee of IEOM since 2012 till now. Also he is member of jury team of International Management Conference since 2010 in managerial experience section.

08:25 - 08:50 (Tuesday)

## Saeed Salimi Beni National Iranian Gas Company Tehran, Iran

ID 268 Index Selection of Monitoring Technical Inspection Department in National Iranian Gas Company

Saeid Salimi Beni is a Mechanical Supervisor, and Head of Mechanical assessment Crew for Manufacturer Facilities, Equipments in Gas Industrial, National Iranian Gas Company. He earned B.S. in Mechanical Engineering from Petroleum Institute of Technology, Ahvaz, Iran.

08:50 - 09:15 (Tuesday)



**Dr. Ari Maunuksela**Director/Principal
TEAK Ltd. – A Center for Vocational Training and Education
Teuva, Finland

Dr. Maunuksela works as a director/principal with TEAK Ltd. TEAK is a Center for Vocational Training and Education. Core competences of TEAK include wood and carpenter training programs, robotics and automation, CAD/CAM/CNC/3D technologies, upholstery, interior decorations, surface treatment. TEAK has extensive experience as a leading training & education company on wood industries, robotics and automation. We provide both hands-on training and web-based education. Ari Maunuksela holds a Ph.D. in Industrial Management, from University of Vaasa. Prior to joining TEAK he has worked in director positions in R&D and product management within international telecommunications industry companies. He has also experience from start-up companies with new

technologies. Before moving to industry Dr. Maunuksela worked in academia as a researcher and teacher. He has published articles in refereed scientific journals and international conferences, especially related with innovation and product development. Currently he is also working as a board member of small and medium sized companies. Dr. Maunuksela has given presentations and speeches in several international conferences.

Session II: Woman in Industry and Academia - Room – Starhill 4

11:30 - 12:45 (Tuesday)

Chair: Dr. Adibah Shuib, Universiti Teknologi MARA (UiTM)

11:30 - 11:55 (Tuesday)



Dr. Adibah Shuib

Acting President of MSORMS (Malaysian Society of Operations Research and Management Science)
Head of Strategic Planning (Monitoring)
Centre for Strategic Planning
Universiti Teknologi MARA (UiTM)

Dr. Adibah Shuib is an Associate Professor in the Faculty of Computer and Mathematical Sciences of the Universiti Teknologi MARA (UiTM), Malaysia. She received her Bachelor of Science degree in Mathematics and Master of Science in Computational & Applied Mathematics from the Old Dominion University, USA. She received her PhD in Mathematics and Statistics from the University of Birmingham, United Kingdom.

Assoc. Prof. Dr. Adibah Shuib is currently the Head of Strategic Planning at the Centre for Strategic Planning and Information of UiTM. Her main responsibilities include monitoring the implementation of the university's strategic initiatives and the achievement of the University's KPIs. She is also the Director for the Integrated

Programme Management of the UiTM's Transformation Programme.

Her research interests are in the areas of mathematical modelling and optimisation. Her research include those on vehicle routing problems, emergency medical services particularly on ambulance routing and ambulance location and relocation, cross docking management, diet plan optimisation, airport revenue optimisation, vehicle scheduling and portfolio investment. She has also published widely in international journals and conferences.

Assoc. Prof. Dr. Adibah Shuib is now the Acting President of the Management Science and Operations Research Society of Malaysia (MSORSM). Being a Council Member of the MSORSM since 2009, where she has held the position of Secretary, then the Vice President, has given her the opportunity to be involved with many companies and universities through many activities and also meeting with individuals of various career backgrounds in industries as well as the academia.

11:55 – 12:20 (Tuesday)

Dr. Mei Fong Chong

Professor, Faculty of Engineering

The University of Nottingham Malaysia Campus
Selangor Darul Ehsan, Malaysia

12:20 – 12:45 (Tuesday) **OPEN** 

Session III: Industry Solutions - Room - Starhill 4

2:30 - 3:45 pm (Tuesday)

Chair: Kishor Kulkarni, Tata Technology, Pune, India

2:30 - 2:55 (Tuesday)

# Reza Mesgarian Head of Process Engineering National Iranian Gas Company

Tehran, Iran

ID 251 Use of Low Heating Value Natural Gas by Blending With Fuel Gas

2:55 - 3:20 (Tuesday)



**Dr. Hakan Butuner**IMECO Industrial Management & Engineering Co. Istanbul, Turkey

**ID 008: Systematic Competency Based Training Needs Analysis** 

Dr. Hakan Butuner received his B.Sc. in Industrial Engineering from Middle East Technical University; MBA from Bilkent University; and Ph.D. in Engineering Management from the University of Missouri-Rolla. He has been active both in academic and professional fields for several years as a project manager in overseas; as a strategic planning and business development director; and as an operations improvement program manager. During the same periods, he has been lecturing in the Business Schools and/or Industrial Engineering Departments of well-known Universities. Currently, he is lecturing as a part-time faculty in Business Schools, plus acting as the affiliates of several US companies in industrial management and engineering consulting and training fields. Additionally, he is the president of Institute of Industrial Engineers – Turkish professional chapter; and board member of Institute of High Performance Planners in Kansas City. During his career path, he has participated in

several projects. Plus, he has several publications and books (especially in Operations Management and Improvement and Strategic Planning).

3:20 - 3:45 (Tuesday)



Kishor Kulkarni Sr. Project Engineer Tata Technology Pune, India

**Biography:** Kishor Kulkarni is Sr. Project Engineer in Tata Technology, Pune with 4 years for experience in automotive interiors, expertise in manufacturing, validation & development of plastic interior parts of luxury cars. He has completed MBA from Karnataka State Open University in 2013 and B.E. (Industrial Production) from Vishvesharaya Technical University, Belgaum in the year 2011. Presently, he is pursuing my studies for award of Master of Engineering (M.E. in Production Engineering) in Shivaji University, Kolhapur. Applied patent for Low Cost POP fixtures & welding nests for prototype production. The fabrication cost reduced by 99% and lead time

reduced by 99.5%. He has presented research paper at International Conference on Multidisciplinary Research & Practice 2014,

Kuala Lumpur, Malaysia

IIM Ahmedabad. Mr. Kulkarni has presented research paper at GSCSR 2015 (Global summit on corporate social responsibilities) New Delhi titled "Challenges & opportunities for CSR in India". He also published a research paper titled "Sweeping Jet Flushing for EDM" in International Journal of Research & Scientific Innovation.

#### Abstract

Productivity and efficiency measurement and improvement go hand in hand, because one cannot improve what one cannot measure. Hence measuring productivity and efficiency is essential for all kinds of production plants to perform better. There is huge scope for research on measurement of the productivity and efficiency for pre-serial production plant, as there are no findings of literatures in this regard. This research is about the operations of pre-serial production plants and bottlenecks in adopting the standard methodologies of measurement of productivity and efficiency which are generally followed in serial production and batch production plants & developing a new measurement technique for productivity & efficiency for pre-serial & prototype production plants. As per the findings, the appropriate methodology for measurement of productivity and efficiency of Pre-serial production plants is not well set till now. Most of the companies who operates pre-serial production plants adapted the methodologies which are suitable only for serial production.

As compared to serial and batch production plants, the pre-serial production plants work totally differently. In serial production plants the product is optimized and all the relevant data which contributes in the measurement of productivity and efficiency is available. The pre-serial plants are responsible for product optimization. In these plants the product optimization is primary objective and process is secondary. Hence we cannot finalize the inputs like cycle time, machining time; labor usage till the product is finalized. The value of input measures will keep on changing during optimization of product and process. Hence using these values for measurement of productivity makes no sense. Once the product is optimized then the suitable processes will get optimized and the trails will takes place. The results from trails will be considered as the input measures for productivity measurement. As the working methodology and process of serial and pre-serial production plants differs from each other, there is a need to develop a measurement technique which can efficiently measure the productivity of pre-serial plants.

The author will work on defining a new measurement model/methodology for pre-serial plants and as per the pre-study it has been decided that the author will divide the production process into micro processes and define the standard for each process which will be considered as standard and compared with actual parameters which will leads to find out productivity and efficiency of the pre-serial production plants. This horizontal deployment of this methodology can be done to batch production and also prototype production plants with suitable modifications.

Session IV: Industry Solutions - Room - Starhill 4 4:00 - 7:00 pm (Tuesday)

# Big Data in Manufacturing and Service Industry



Dr. Andrew Kusiak
Intelligent Systems Laboratory
Professor, Department of Mechanical and Industrial Engineering
The University of Iowa
Iowa City, Iowa, USA

### Abstract:

Big data will play a key role in shaping the design and innovation of products, production, and services by making them smarter, better connected, more efficient and widely accessible. Data analysis has been enlarging its footprint in business and engineering applications for the last two decades. The industrial engineering profession can be at the forefront of applying big data analysis and research in product development, manufacturing, and service areas. Basic data

mining algorithms applicable to analysis of big data are introduced. Applications of big data analysis in product design and innovation, manufacturing, remanufacturing, and service domains will be the focus.

Industrial engineering needs to be open to embracing applications where data offers value. Product design and development is a highly multidisciplinary process awaiting new solutions. It is widely recognized that design of an innovative product considers data streams originating at customers, experts, trails of data left by products throughout their lifetime, and cyberspace. Disruptive innovations often happen because they meet this expanded set of requirements.

Traditional manufacturing and remanufacturing as well as emerging manufacturing technologies and systems involve data. Data science offers tools for fusing diverse data steams (parameters) that would not be possible with traditional approaches such as operations research or simulation. Sustainability considerations offer another set of data analysis opportunities. Service industry is plentiful of opportunities for big data opportunities to be discussed besides the product design and innovation, manufacturing, remanufacturing, and sustainability applications.

#### Biography:

Dr. Andrew Kusiak is a Professor in the Department of Mechanical and Industrial Engineering at The University of Iowa, Iowa City. His current research interests include applications of computational intelligence and big data in automation, energy, manufacturing, product development, sustainability, and healthcare. He is the author or coauthor of numerous books and hundreds of technical papers published in journals sponsored by professional societies, such as the Association for the Advancement of Artificial Intelligence, the American Society of Mechanical Engineers, Institute of Industrial Engineers, Institute of Electrical and Electronics Engineers, and other societies. He speaks frequently at international meetings, conducts professional seminars, and consults for industrial corporations. Dr. Kusiak has served in various editorial roles of over forty journals.

Professor Kusiak is a Fellow of the Institute of Industrial Engineers and the Editor-in-Chief of the Journal of Intelligent Manufacturing. Besides his academic appointment at the University of Iowa, he holds Distinguished Adjunct Professorship at King Abdulaziz University, Jeddah, Saudi Arabia. His past academic appointments, include the Technical University of Nova Scotia (now Dalhousie University) and the University of Manitoba in Canada, as well as visiting positions at University of Lion, Institut National Polytechnique de Grenoble, University of Nancy, France, and the University of Hong Kong, Hong Kong. His graduate students have assumed prominent positions in academia and industry. Dr. Kusiak has co-advised PhD students at University on Munich, Germany and Institut National Polytechnique de Grenoble, France.

# Wednesday (March 9, 2016)

Session V: Industry Solutions - Room - Starhill 4 8:00 - 9:15 am (Wednesday)

Chair: Md Kawsar Ali, Comfit Composite Knit LTD, Dhaka, Bangladesh

08:00 - 08:25 (Wednesday)

**Arumugam Manikam** Silterra (M) Sdn.Bhd Kulim, Kedah, Malaysia

ID 627 Yield Improvement of Wafer Edge Die Defocus (EDD) at Via Layer

8:25 - 8:50 am



Vivek Sundar Magesh
TVS Logistics Services Limited
Chennai, India

ID 218 Maximising Revenues in the "Tatkal" Category of Indian Railways

**Vivek Sundar Magesh** is an MBA from the Indian Institute of Management at Tiruchirappalli, India. He is presently employed at TVS Logistics Services Limited. His interest areas are in developing better public systems and tackling global problems using techniques from Management Science. He also has an Electrical Engineering degree from the prestigious National Institute of Technology at Tiruchirappalli, India. As an Engineer he has published papers on optimization using heuristics. He looks forward to researching about improving public systems to tackle global challenges by joining a doctoral program in a reputed global business school.

08:50 - 09:15 (Wednesday)

Kuala Lumpur, Malaysia



Md Kawsar Ali
Chief Operating Officer
Comfit Composite Knit LTD
Gorai, Mirzapur, Tangail
Dhaka, Bangladesh

Md. Kawsar Ali is a well-known expert and mentor in the garment industries of Bangladesh. He has twenty one years of professional experiences in RMG sector. He has worked in different capacities in leading companies like Beximco, Square, Orion and DBL. He has got strong communication, interpersonal relations, mentoring, negotiation and cross-cultural organizational skills, and has demonstrated such over the years with utmost productivity and reputation. He is also expert in Total Quality Management, Lean manufacturing, Kaizen, Leadership and self-development courses like Meditation and Yoga. Mr. Kawsar has completed his graduation from Khulna University of Engineering and Technology (KUET) also obtained an MBA degree from Dhaka University. He has participated in many workshops, seminars and training

sessions in Bangladesh and abroad.

Session VI: Industry Solutions Room – Starhill 4 11:30 am – 12:45 pm (Wednesday)

Chair: Farrah "Nix" A. Juban, Intel Corporation, Penang, Malaysia

11:30 - 11:55 (Wednesday)



**Dr. Zain Tahboub**Chief Advisor-Director of Excellence & Innovation
Dubai Aviation Engineering Projects (DAEP)
United Arab Emirates (UAE)

"I<sup>3</sup> University of the future for integrating the university with industry and innovation"

Dr. Zain Elabideen Tahboub is Chief Advisor of Director of Excellence and Innovation of Dubai Aviation Engineering Projects, UAE. He got his Ph.D. and M.Sc. in Industrial and Systems Engineering from Ohio State University. Immediately after, he joined hands with three colleagues to form the Industrial Engineering department at the University of Jordan in 1987. He lead the M.Sc. program in Engineering Management for several years where it came became a leading program for the University of Jordan. The graduates of the department became among the most respected and demanded professionals in many positions, Dubai is no exception where a number of IE's are among the top decision makers of the Executive Council and many other government entities. At the same time, he was working with industry in many important programs; he was the Corporate Adviser for Royal Jordanian Airlines 1994-1998 where he helped in the recovery of the Airline to become profitable again. During his work at the University of Jordan, he assumed several roles to bring industry and academia together; he was the director of the Outreach Program, the chairman of the National Committee on Relationship between Academia and Industry which lead to forming new partnership and models in new universities. In 2005, he left the University of Jordan to be the Dean of Majan University College in Oman. In 2009, he joined Dubai Aviation Engineering Projects as Specialist Adviser, then assuming other roles and responsibilities including strategy, research, knowledge management and innovation where he is working on building new concepts and models for innovation. Recently, Zain was an active member in developing Dubai Plan 2021.

11:55 - 12:20 (Wednesday)



Md Fauzi Ahmad Production and Operation Department Universiti Tun Hussein Onn Malaysia (UTHM) Batu Pahat, Johor, Malaysia

ID 692 Critical Success Factors of Six Sigma Implementation in Malaysian
Manufacturing Industry

Md Fauzi Ahmad, Wong Jing Ping, Nor Āziati Abdul Hamid, Shiau Wei Chan, Production and Operation Department, Universiti Tun Hussein Onn Malaysia (UTHM) Josu Takala, Department of Engineering Science and Industrial Management, University of Vaasa, Wolffintie, Finland

Md Fauzi Ahmad is an academic staff at UTHM. His undergraduate studies was in Electrical & Electronic Engineering from Muroran Institute of Techonolgy (MIT), Japan and Post Graduate studies in Total Quality Management (TQM) from Universiti

Teknologi Malaysia (UTM). His majoring research is in TQM of Japanese companies and actively publishing international and local journals. He embarked his career as Quality Engineer at Sharp Corporation in 1999 and has been assigned at various departments which include Product Quality Assurance (PQA), Quality Control (QC), Product Planning and Sales Department. He has working experience for 12 good years in quality and marketing management. He is a Certified Quality Engineer (CQE) from Federation Manufacturing Malaysia (FMM) and Sharp Corporation Japan. He also participated in On Job Training (OJT) for quality, reliability management and data analysis at Sharp Corporation, Japan under Association of Overseas Technical Scholarship (AOTS). He also contributed in establishing company strategy for improving customer satisfaction and other major improvement projects. He has working with Japanese companies for more than 12 years.

12:20 - 12:45 (Wednesday)

Farrah "Nix" A. Juban

Process Engineering Excellence & Kaizen Service Program Manager for Assembly and Test Manufacturing Intel Corporation
Penang, Malaysia

When Change is Good The Kaizen Way in Intel Vietnam Assembly and Test Factory's (VNAT)

Session VII: Room – Starhill 4 2:30 – 3:45 pm (Wednesday)

Chair

PANEL SESSION - Woman in Industry and Academia



**Ms. Resh Plaha** BSc (Hons), IoD, IRCA, ACQI Crystal Quality UK Ltd

Ms. Resh Plaha sits on the UK's Chartered Quality Institute ISO9001:2015 Review Panel which reports directly into the ISO Geneva Head Office, ISO Technical Committee 176: Quality Management and Quality Assurance. Resh is also a member of the International Register of Certificated Auditors (IRCA) Advisory Panel responsible for providing thought leadership on the development, promotion and publication of audit methodologies, auditor competencies, auditor training and continuous professional development. Resh is a registered Lead Auditor with IRCA and a Member of the Institute of Directors. She is Managing Director of Crystal Quality UK Ltd, a private company offering bespoke project management consultancy and training services to

organisations seeking registration to international standards in Quality Management Systems, Environmental, Health and Safety Systems including Food Safety. Major clients include Mercedes-Benz UK Ltd; the Ministry of Defence; Food and Beverage suppliers to Marks and Spencer plc; Central and local UK Government; Aerospace and other capital goods manufacturing organisations. Resh has a wealth of industrial and management experience that spans over 30 years in Quality Management Systems, commencing in the Food Industry before joining SGS, the international leading certification company. She is a highly experienced trainer and international speaker having personally delivered numerous short public IRCA approved training courses to delegates worldwide. Resh has presented at international conferences, delivered entrepreneurial and quality training

at Singapore Nanyang Technological University, Hong Kong Polytechnic University and is a guest lecturer at Loughborough University, United Kingdom. She is a strong advocate of women's business roles in society and believes in leading by example.



Institute (PARI), Japan.

# Dr. Chan Chee-Ming

Associate Professor and Deputy Dean (Academic and Research)
Centre for Graduate Studies
Universiti Tun Hussein Onn Malaysia
Batu Pahat, Johor, Malaysia

Bio: Chee-Ming Chan is an Associate Professor with the Civil Engineering Technology Department, Faculty of Engineering Technology, Universiti Tun Hussein Onn Malaysia. She is presently holding the office of Deputy Dean in Academic and Research at the Centre for Graduate Studies in the University. Her area of expertise includes geomaterials, engineering education and higher education improvement. More recently, Dr. Chan's current work on dredged materials from Malaysian waters has gained momentum and support from the Ministry of Science, Technology and Innovation and Department of Marine, Malaysia. She is also involved in professional bodies, including the Society for Engineering Education Malaysia (SEEM), Malaysian Geosynthetics Society (MyIGS), Institution of Engineers Malaysia (IEM), Board of Engineers Malaysia (BEM), and is an education quality auditor for the Malaysian Qualification Agency (MQA). From 2009-11, Dr. Chan served as a Postdoctoral Research Fellow at the Port and Airport Research

# Dr. Mei Fong Chong

Professor, Faculty of Engineering The University of Nottingham Malaysia Campus Selangor Darul Ehsan, Malaysia



**Prof. Christine Ennew** 

Provost, University of Nottingham Malaysia Campus Pro Vice Chancellor and Professor of Marketing University of Nottingham Malaysia Campus Selangor DE Malaysia

Christine Ennew is Provost and CEO of the University of Nottingham Malaysia Campus and Pro Vice Chancellor at the University of Nottingham. Christine graduated from Cambridge University and completed her PhD at Nottingham. She was appointed to lead UNMC in January 2013 and is responsible for the Nottingham's first international campus which is located to the south of Kuala Lumpur and is home to almost 5000 students and around 650 staff. She was previously Dean of Social Sciences and has been Pro Vice Chancellor since 2008. She serves on a number of advisory boards internationally and is the University's Manager for the Universitas21 network.



# Dr. Ilham Kissani

Assistant Professor of Engineering & Management Science School of Science & Engineering Al Akhawayn University Ifrane, Morocco

**Dr. Ilham Kissani** is an assistant professor in the field of engineering management for the School of Science and Engineering at Al Akhawayn University in Ifrane, Morocco. She has served as the main advisor and lead instructor for the undergraduate and MS programs in Engineering and Management Systems since 2010. She has helped create very close ties with the AUI School of Business Administration, which allows both schools to leverage our resources and deliver a greater diversity of courses to students, such as supply chain

management and operations management. Her background is diverse and includes industrial experience as well as academic. Her degrees are from INSEA, Morocco (Engineer) and Université Laval, Canada (Master and Ph.D). She has worked with Royal Dutch Shell as a project manager and with Modellium Québec, where she consulted in logistics and supply chain issues. Additionally, Dr. Kissani contributes in research in supply chain management, planning, and operations research. She is a member of ASEM, IEEE, IEOM, IIE, INFORMS.



# Dr. Stefanie Pillai

Dean and Associate Professor Faculty of Languages & Linguistics University of Malaya Kuala Lumpur, Malaysia

Dr. Pillali is an Associate Professor at the Department of English Language, Faculty of Languages and Linguistics, University of Malaya (UM). Her main areas of research interest are the segmental and prosodic features of spoken Malaysian English, and the revitalisation of Malacca Portuguese Creole or Cristang. His initial work on the Creole was funded by, and has been archived in the Endangered Languages Archive. Dr. Pillali is currently the Dean of the Faculty of Languages and Linguistics. He was the Deputy Dean for Postgraduate Studies of the Faculty from August 2014, and previously headed the University's Centre for Industrial Training and Relations, which later expanded to become the Centre for Community and Industry

Relations.

Session VIII: Woman in Industry and Academia - Room – Starhill 4 4:00 – 5:15 pm (Wednesday)

Chair: Dr. Stefanie Pillai, University of Malaya, Kuala Lumpur, Malaysia

4:00 - 4:25 (Wednesday)

# Ms. Priyadarshani Premarathne

Department of Sociology, Faculty of Arts University of Peradeniya Sri Lanka

ID 241 Perception of female employees towards the Lean and work culture change in apparel industry in Sri Lanka Sewwandi and H.D.P. Premarathne, Department of Sociology, Faculty of Arts, University of Peradeniya, Sri Lanka Morawaka and A.K. Kulatunga, Dept.of Production Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka

4:25 - 4:50 (Wednesday)

Mahmmad Mahbub Alam Talikder Accident Research Institute (ARI)

Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

ID 610 Burn Accident related Injuries and Disabilities among the RMG Women Workers: A Case Study of Tazreen Garments Trazedy

4:50 - 5:15 (Wednesday)



Relations.

# Dr. Stefanie Pillai Dean and Associate Professor Faculty of Languages & Linguistics University of Malaya Kuala Lumpur, Malaysia

Dr. Pillali is an Associate Professor at the Department of English Language, Faculty of Languages and Linguistics, University of Malaya (UM). Her main areas of research interest are the segmental and prosodic features of spoken Malaysian English, and the revitalisation of Malacca Portuguese Creole or Cristang. His initial work on the Creole was funded by, and has been archived in the Endangered Languages Archive. Dr. Pillali is currently the Dean of the Faculty of Languages and Linguistics. He was the Deputy Dean for Postgraduate Studies of the Faculty from August 2014, and previously headed the University's Centre for Industrial Training and Relations, which later expanded to become the Centre for Community and Industry

# Thursday (March 10, 2016)

Session IX: Industry Solutions - Room - Starhill 4 8:00 - 9:15 am (Thursday)

Chair: Masaru Tezuka, Hitachi Solutions East Japan, Ltd.

08:00 - 08:25 (Thursday)



**Masaru Tezuka** Hitachi Solutions East Japan, Ltd. Sendai, Miyagi, Japan

Masaru Tezuka is the Manager of the Research and Development Department at Hitachi Solutions East Japan, Ltd. He received a BE and ME in bio-physical engineering from Osaka University, Japan and a PhD in systems and Information engineering from Hokkaido University, Japan. He is a certified Systems Analyst and a certified Application Systems Design Engineer. He served in Malaysia as a short-term expert in operations research of the Japan International Cooperation Agency in 1998. His research interests include nonlinear optimization, evolutionary computation, computational intelligence, computational statistics, risk analysis, and their industrial application. He is a member of the Information Processing Society of Japan.

ID 186: Importance of the Strategic Utilization of Information Technology in Small and Medium-Sized Food Manufacturers in Japan Masaru Tezuka and Junko Miyazaki, Hitachi Solutions East Japan, Ltd., Sendai, Miyagi, Japan Masaki Fujiwara and Miyuki Koriki, Miyagi University, Kurokawagun, Miyagi, Japan

08:25 - 08:50 (Thursday)



**Dr. Jalaluddin Harun**Director General
Malaysian Timber Industry Board (MTIB)

08:50 - 09:15 (Thursday)



Prof. Dr. Bhuvenesh Rajamony School of Manufacturing Engineering University Malaysia Perlis UniMAP Perlis, Malaysia

The challenges or issues that Malaysian industries are facing in order to implement and successfully sustain the lean manufacturing processes.

**Prof. Dr. Bhuvenesh Rajamony** received B.Eng. in Mechanical Engineering from the University of Madurai, in 1974 and M.Sc.Eng. in Mechanical Engineering with Machine Tools Engineering from the

University of Madras in 1976. He received his Ph.D degree in Mechanical Engineering with Manufacturing Technology from the University of Bombay, India, in 1988. After Doctoral received additional post graduate D.I.E. in Industrial Engineering in 1991 from the University of Bombay. He is one of the recognized Research Guide in the field of Production, Mechanical and Industrial Engineering by different universities. He has more than 40 years of teaching and research experience with different higher ranking Universities like University of Madras, University of Bombay, University of Sheffield, UiTM and USM. He is currently with the UniMAP as Professor of Manufacturing Engineering from 2004.

Dr. Bhuvenesh is a Life Fellow member of the Institution of Engineers F.I.E. India, a Fellow member of the Institution of Plant Engineers F.I.I.P.E, Life member of Indian Society of Manufacturing Engineers M.I.S.M.E., and a Senior Life member of Indian society for technical education M.I.S.T.E. and Charted Engineer C. Eng. and Member of IEOM.

Dr. Bhuvenesh works in multiple areas of Advanced Manufacturing: Computer Integrated Manufacturing, Flexible Manufacturing Systems, CNC machines, Industrial engineering and Ergonomics. He has provided consultancy for many companies like Larsen & Toubro, Voltas, Mahindra, PAL, Telco and TATA in his specialist areas of Special purpose Machines, Advanced Manufacturing, Quality Management and Industrial Engineering. He has written and published more than 100 technical papers and reports in these areas in the international, national journals and conference proceedings. He has been the principal investigator of many manufacturing projects with CNC machines, metal cutting and industrial engineering projects with different industries and Universities. In UniMAP, responsible for setting up the Advanced Manufacturing Laboratory with EDM machine, Plasma cutting and TIG welding. He is also responsible for setting up the Advanced Flexible Manufacturing Laboratory with Robotics, Material Handling and the Ergonomics laboratory. He has also completed two funded research projects, one for Science Fund and another for Fundamental Research Grant from the Ministry of Science & Technology, MOSTI, Malaysia.

Abstract - One of the main issues with the different industries today is to manufacture products that help in elimination cost as well as works towards waste reduction. These and many other industries related problems had led to the formation of lean manufacturing, a method that was initially implemented by Toyota of Japan. However, there is very little, almost no research that is done on lean manufacturing in Malaysia and there is a lot of struggle that Malaysian manufacturing industry is facing in the implementation and sustenance of lean principles as well as policies. The present project research is an attempt to find the challenges or issues that Malaysian industries are facing in order to implement and successfully sustain the lean manufacturing processes. The researcher would try to investigate on the topic by taking mixed analysis method, where both primary and secondary researches would be conducted. This research would also take in the different principles and concepts in lean manufacturing and collate it with the primary findings. Overall, this study can be used as a benchmarking for successful lean manufacturing implementation in other developing countries.

Session X: Industry Solutions - Room - Starhill 4

11:30 am – 12:45 pm (Thursday)

Chair: Ms. Resh Plaha, Crystal Quality UK Ltd

11:30 - 12:20 (Thursday)



Mr. Takenori Kabeya
Senior Engineer and IT Specialist of Production, Sales and Inventory Solution Department
Business Solution Division
Hitachi Solutions East Japan, Ltd.

Designing demand and supply operation tailored to industry sector and business category

**Abstract**: The internationalization of corporate activities and an advancing international division of labor are driven by the progress of logistics and information technology. Meanwhile, as both natural and political risks increase, an accident in one region can

impact the overall supply chain. Under the circumstances, because of uncertainty on both the supply and demand sides, those involved with the supply chain should understand and estimate the fluctuation swiftly and precisely, optimizing procurement, production, and inventories. From a practical perspective, a demand–supply operation varies greatly by industry sector, business category, and regional characteristics, as does supply chain management systems.

For example, the demand for materials such as metals and chemical products is relatively stable; however, the production process involves many constraints in the form of annealing, washing, and setup. These constraints pose difficulties in supply adjustments. Therefore, the manufacturers focus on the stable control of supply. On the other hand, the demand for home appliances is turbulent. Thus, the manufacturers in this industry focus on the flexible control of supply following changes in demand. Additionally, acceptable supply lead times including transport tend to be shorter in small countries like Japan than in large countries like the U.S. This difference should produce a different level of difficulty in demand–supply coordination. The market of the supply chain planning (SCP) system as a replacement of the production planning system is rapidly growing; however, the introduction of SCP cannot achieve success unless the system is designed to fit the industry and business category.

**Biography**: Takenori Kabeya is a Senior Engineer and IT Specialist of the PSI (Production-Sales-Inventory) Solution Department at Hitachi Solutions East Japan, Ltd. He earned a master's degree in chemical engineering at the Graduate School of Engineering, Kyoto University, Japan. He has developed and provided supply chain planning (SCP) tools and systems such as production planning systems, demand forecasting tools, demand planning systems, and inventory analysis tools with the international development team based in Japan, India and the U.S. His customer list covers various types of businesses, including material manufacturers, assembly manufacturers, fabless manufacturers, and wholesalers in Japan, Malaysia, Indonesia, Thailand, and so on. These customers are spread across a wide business area encompassing home appliances, car audio systems, chemicals, pharmaceuticals, consumer packaged goods (CPG), metals, beverages, and so on. His current task is to design optimal system architecture for SCP solutions.

12:20 - 12:45 (Thursday)



Ms. Resh Plaha BSc (Hons), IoD, IRCA, ACQI Crystal Quality UK Ltd

Ms. Resh Plaha sits on the UK's Chartered Quality Institute ISO9001:2015 Review Panel which reports directly into the ISO Geneva Head Office, ISO Technical Committee 176: Quality Management and Quality Assurance. Resh is also a member of the International Register of Certificated Auditors (IRCA) Advisory Panel responsible for providing thought leadership on the development, promotion and publication of audit methodologies, auditor competencies, auditor training and continuous professional development. Resh is a registered Lead Auditor with IRCA and a Member of the Institute of Directors. She is Managing Director of Crystal Quality UK Ltd, a private company offering bespoke project management consultancy and training services to

organisations seeking registration to international standards in Quality Management Systems, Environmental, Health and Safety Systems including Food Safety. Major clients include Mercedes-Benz UK Ltd; the Ministry of Defence; Food and Beverage suppliers to Marks and Spencer plc; Central and local UK Government; Aerospace and other capital goods manufacturing organisations. Resh has a wealth of industrial and management experience that spans over 30 years in Quality Management Systems, commencing in the Food Industry before joining SGS, the international leading certification company. She is a highly

experienced trainer and international speaker having personally delivered numerous short public IRCA approved training courses to delegates worldwide. Resh has presented at international conferences, delivered entrepreneurial and quality training at Singapore Nanyang Technological University, Hong Kong Polytechnic University and is a guest lecturer at Loughborough University, United Kingdom. She is a strong advocate of women's business roles in society and believes in leading by example.

Session XI: Industry Solutions - Room - Starhill 4 2:30 - 3:45 pm (Thursday)

Chair: Johann Ong, SilTerra Malaysia Sdn Bhd., Kulim, Kedah, Malaysia

2:30 - 2:55 (Thursday)



Parth Rashmikant Patel
Executive Director
Apollo Techno Equipments Limited
Ahmedabad, Gujarat, India

**Parth Patel** is an Executive Director at Apollo Techno Equipments Limited, Gujarat, India. Previously, He was working as Quality Engineer at Sakthi Automotive Group USA. He was a Master of Science student in Industrial Engineering Program at Lawrence Technological University, USA. He holds a Bachelor Degree in Mechanical Engineering from Visvesvaraya Technological University, Bangalore, India. He has attained an industrial experience working as a Mechanical Engineer at Apollo Construction Equipments Private Limited, India. He completed his training on Industrial Hydraulics at Rexroth Bosch Group,

India. He has knowledge of ANSYS, AutoCAD, and Minitab. His expertise lies in CNC Programming, CIM Modeling and Arena. His research interest includes Manufacturing Process, Quality, and Six Sigma. He has a positive energy and a dream of manufacturing world-class facility that can contribute to the growth of his country.

2:55 - 3:20 pm

# Johann Ong SilTerra Malaysia Sdn Bhd. Kulim, Kedah, Malaysia

**Ong Johann** works as a Principle Engineer in SilTerra Malaysia Sdn Bhd. He earned B. (Hons) in Computer Aided Engineering from South Bank University, London. UK and Master Sc in Information Technology in Business. Currently he is pursuing his PhD in Manufacturing Engineering Faculty, University Teknikal Malaysia, Melaka.

ID 457 Eliminate Salicide Residues in Wafer Fabrication Front-End Pre-Metal Layer Cleaning Process
Johann Ong and Bee Hoon Tan, SilTerra Malaysia Sdn Bhd., Kulim, Kedah, Malaysia

3:20 - 3:45 pm



**Dr. D. Muruganandam**Production Engineering Department
Sri Sairam Engineering College
Chennai. India

Dr. D. Muruganandam, In the midst of a healthy and intellectual upbringing, he obtained his Bachelor Degree in Mechanical Engineering from Madras University, in 1997. Subsequently, he obtained his M.E. in Computer Aided Design from Sathyabama University, Chennai, in 2002. Besides having a strong technical expertise and analytical skills, he acquired his Ph.D degree from Sathyabama University, Chennai, he has contributed to the areas of Welding, Engineering Design with his 49 research publications. A technical and education management expert, Dr. Muruganandam, believes that Science, Engineering and Technology are advancing at a fast pace and obsolescence of physical infrastructure, skills and competence takes place rapidly. He is keen

on taking steps to improve the existing infrastructure, investment and intellectual strength wherever they exist and network them so as to utilize them effectively and optimally for meeting the changing needs. Not only does he profess the values of Indian culture but also does he practice many of the fundamental principles of humanity and society. While dedicating himself to the cause of creating a world class infrastructure, he has also undertaken many community services in various parts of India out of

his quest to contribute more to society. He is member in SAE, MISTE, MISNT, MNIQR, SAISE, IRED, IAEngg, MMS, IWS, IIW, IIPro, and he has authored two books for budding Engineers. He is awarded with team building award in SAE NSS award Resource person for IRC Currently, Dr. Muruganandam is the Professor of Production Department of the internationally leading and highly advanced technical College – Sri Sairam Engineering College and he is known for his virtues as a wise mentor, friendly teacher, innovative administrator, and visionary leader.

Session XII: Industry Solutions - Room - Starhill 4 4:00 - 5:15 pm (Thursday)

4:00 – 4:25 (Thursday) OPEN

4:25 - 4:50 (Thursday) OPEN

4:50 – 5:15 (Thursday) OPEN

# Lean Six-Sigma Green Belt Workshop

March 7-8, 2016 (Monday and Tuesday)

# DAY I: March 7, 2016 (Monday)

- 1. Introduction of participants
- 2. Pre-Test and Evaluation of Lean and Six-Sigma Concept
- 3. Understanding Lean Manufacturing Management and Lean Business Principles
- The role of corporate and organizational leadership in Lean Manufacturing Management implementation
- · Waste Identification and Elimination
- Traditional 7 types of Waste proposed as part of the Toyota Production System by Taiichi Uhno, previously a Chief Engineer at Toyota Motor Company.
- · Other Types of Waste
- 4. Understanding Six Sigma
- · Describe the objectives of Six Sigma
- · Describe the relationship between variation and sigma
- · Recognize some Six Sigma concepts
- Recognize the Six Sigma implementation model (DMAIC)
- Describe your role and responsibilities in Lean Six Sigma (LSS)
- 5. Describe the relationship between Lean and Six-Sigma and the importance of their co-existence within operations and in other business processes.
- 6. Define and explain Lean Six Sigma
- 7. Selecting Projects
- · Utilize a structured approach to select projects
- · Refine and Define the problem into a Project Charter
- Make an initial estimate of your project's benefits
- 8. Mini Group Exercise (Project) Proposed by the group, completed and presented to Class

# DAY II: March 8, 2016 (Tuesday) 9. Lean Six Sigma Fundamentals

- · Describe what is meant by "Process Focus"
- Describe the importance of VOC, VOB, and VOE, and CTQ's
- Explain COPQ
- List and explain Lean Six-Sigma Tools
- Describe the Lean Six Sigma metrics
- Explain the difference between DPU and DPMO
- 10. Lean Six-Sigma Implementation
- Explain the importance of the different stakeholders including the senior executive team and the different roles they play in Lean Six Sigma project and system implementation.
- Explain the roles of Master Black Belts, Black Belts Green Belts and or Department managers, supervisors, team members and their roles in Lean Six-Sigma Implementation
- Importance of Project Charter, GEMBA, Lean Six-Sigma Training prior to Lean Six-Sigma implementation
- Generate a Process and Value Stream Map (From Morning Session)
- Statistical Tools required for Lean Six-Sigma
- Importance of Data Collection and Analysis
- How to determination of Defects per Unit (DPU)
- How to determine Defects per Million of Opportunities (DPMO)
- Utilization of current and future states of the system to show process or system's improvement.
- Lean Six-Sigma Project presentation and closure
- 11. Final Group Exercise Lean Six Sigma mini Project Proposed by each group
- 12. Final Test and presentation of Certificates

#### **SPEAKER**



### Dr. Joseph M. Ogundu, MBB

President and CEO – Emerald Global Consulting Inc. West Bloomfield, Michigan, USA

Dr. Joseph M. Ogundu is an experienced corporate executive and lean management and six-sigma consultant that brings fresh knowledge and perspectives to employers, government agencies and corporate clients. This executive and coach who works in the oil and gas, automotive and non-automotive industries has hands on experience in development and implementation of strategic management solutions based on lean business process, six-sigma and total quality management principles. Dr Ogundu has helped several companies develop, implement and improve their business process excellence, quality improvement, operational efficiency, cash flow and profitability using strategic business performance score cards to measure performance. He helped several companies to save millions of dollars through lean implementation and continuous improvement execution.

Dr. Ogundu has worked with companies in the oil and gas, automotive and non-automotive industries to develop and execute turnaround and restructuring strategies including reengineering of business

processes for maintaining competitive advantage and sustainment of organizational viability. Dr Ogundu was an employee or consultant for the following companies; General Motors Corporation, Ford Motor Company, Chrysler Corporation, Daimler Chrysler AG., Country Coach Inc., ESTG Inc., Park Ohio, General Aluminum Company, Argo Inc, Suncor Energy Inc, Nobel Automotive, Finer Cabinetry & Woodwork, Bend River Sash Door Company, Morgan Fine Finishing, Magna Corporation, Axis Manufacturing, Trim-X Technologies, Oakland University and Lawrence Tech University.

Dr. Ogundu is an expert in the areas of technical and business innovations, Lean Manufacturing Management, Lean Business Processes, Lean Six-Sigma, Total Quality Management, ISO/TS 16949, Supply Chain Management, Operations and Business Performance Score Cards. He has over 27 years of experience that span across several industries that included oil and gas, automotive, Recreational Vehicles, Manufacturing which included work in United States, Austria, Korea, Canada, Mexico, Germany and Nigeria. He has been adjunct professor at Lawrence Tech University and Oakland University. Dr. Ogundu directed and managed organizations and led diverse teams of corporate executives, engineers, managers and union workers. He has participated in development and construction of facilities and major infrastructure projects. He has coached and trained business executives and owners on the utilization of lean principles, six-sigma and business process excellence as strategic philosophies for improving profitability and for organizational viability.

Dr. Ogundu holds a Doctor of Engineering in Manufacturing Systems from Lawrence Technological University, Master of Business Administration (MBA) from Lawrence Technological University, Master of Science in Manufacturing Engineering from Wayne State University and Bachelor of Science Industrial/Systems Engineering from University of Tennessee, Knoxville. Dr. Ogundu served on the board of the following Profit and Non-Profit organizations; Lawrence Technological College of Management Alumni, Chrysler African American Network, Institute of Industrial Engineers South Eastern Michigan/Ohio Zone, Finer Cabinetry and Woodwork Inc., World Igbo Congress, Rivers State Foundation.

# **Smart Manufacturing Workshop**

March 10, 2016 (Thursday), 8:00 am - 5:00 pm



# **SPEAKER**

# Dr. Rupy Sawhney

Heath Fellow in Business and Engineering Professor, Industrial and Systems Engineering University of Tennessee, Knoxville, USA

Rupy Sawhney is a Professor & Heath Fellow in Industrial and Systems Engineering at the University of Tennessee, Knoxville. He earned B.S. and M.S. in Industrial Engineering and Ph.D. degrees in Engineering Science and Mechanics from the University of Tennessee, Knoxville in 1981, 1984 and 1991 respectively. He was a Weston Fulton Professor and Department Head during 2010-2013. He is also a faculty for the newly created Center for Interdisciplinary Research and Graduate Education (CIRE) in Energy. His current research focuses on trying to use technology and innovation to enhance organizational productivity. Dr. Sawhney has assembled a team over the past five years that has a greatest critical mass within the history of the Industrial

Engineering department to compete with other academic institutions in the lean area. His research group at this moment consists of 40 Postdocs, Ph.D. and Master students. He has published significant journal papers, conference papers and has submitted for 5 patents. He has graduated more than 50 Master's and 8 Ph.D. students. His funded research projects are in the millions of dollars. He has worked with over 200 companies and is a recipient of various awards (Boeing Welliver Fellow, Alcoa Faculty Award, IIE Lean Teaching Award, Reuben Harris Award, and Accenture Teaching Excellence Award).

# Entrepreneurial Mindset: Opportunity Recognition & Value Proposition March 10, 2016 (Thursday), 2:00 pm – 8:00 pm

The ability to recognize an opportunity is a key ingredient in developing an entrepreneurial mindset. Engaging the customer is a significant component of this process. An exploratory seminar and discussion will be held on this subject at the Orlando IEOM Conference on Friday, September 11. You are invite to attend and participate in "painstorming" exercises that will focus on fostering opportunity recognition and engaging the customer. This dynamic process will lead to developing and delivering meaningful "value proposition" for the customer.



**SPEAKER** 

# **Professor Donald M. Reimer**

Director of Entrepreneurial Programs College of Engineering, Lawrence Technological University Southfield, Michigan, USA

Donald M. Reimer is currently a fulltime senior lecturer on entrepreneurship and serves as the Director of Entrepreneurial Programs 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.

Mr. Reimer has served as an adjunct faculty member at Lawrence Technological University for over twenty-years. 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. Mr. Reimer conducted workshops and seminars for trade associations, chamber of commerce organizations and private companies. 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.

# Preliminary Program – IEOM 2016 KL

# March 8 – 10, 2016 JW Marriot Hotel

March 7, 2016 (Monday)

08:00 am - 05:00 pm (Room Starhill 4)

# **Lean Six Sigma Green Belt Certification Workshop**

Dr. Joseph M. Ogundu, MBB
President and CEO – Emerald Global Consulting Inc.
West Bloomfield, Michigan, USA

# March 8, 2016 (Tuesday)

# 08:00 – 09:15, TUESDAY Global Engineering Education I

Starhill 4

Session Chair: S. Indra Devi, Universiti Teknikal Malaysia Melaka

08:00 – 08:25 (Tuesday) **Dr. C. Chinnaraj** 

Professor of Mechanical Engineering and State Project Coordinator (TEQIP)

Directorate of Technical Education

Chennai, Tamil Nadu, INDIA

08:25 - 08:50 (Tuesday)

S. Indra Devi

Senior Lecturer, Department of Languages

Centre for Languages and Human Development

Universiti Teknikal Malaysia Melaka

A Multiliteracies Approach in the Delivery of Engineering Education for Future Global Engineers: The Malaysian Context

08:50 - 09:15 (Tuesday)

Ahmed E. Haroun and Salih O. Duffuaa

Systems Engineering Department

KFUPM, Dhahran, KSA

ID 030: An Effective Organizational Structure to Implement Strategic Plans in Higher Education Institutions

# 08:00 – 09:15, TUESDAY Industry Solutions I

Session Chair: Dr. Ari Maunuksela, TEAK Ltd., Finland

08:00 - 09:15

Ali Massaeli

Technical Inspection and Control National Iranian Gas Company

Tehran, Iran

ID 267: Developing Productivity Monitoring System in a governmental organization with multi-performance objectives: A case study in National Iranian Gas Company

Starhill 5

08:25 – 08:50 (Tuesday) **Saeed Salimi Beni** National Iranian Gas Company Tehran, Iran

ID 268: Index Selection of Monitoring Technical Inspection Department in National Iranian Gas Company

08:50 – 09:15 (Tuesday) **Dr. Ari Maunuksela**Director/Principal

TEAK Ltd. – A Center for Vocational Training and Education
Teuva, Finland

08:00 - 09:30, TUESDAY

# Lean Six Sigma Green Belt Workshop

Starhill 6

Dr. Joseph M. Ogundu, MBB
President and CEO – Emerald Global Consulting Inc.
West Bloomfield, Michigan, USA

08:00 - 09:30, TUESDAY

# **Operations Management I**

Starhill 7

Session Chair: Rahmat Nurcahyo, Universitas Indonesia, Indonesia

### ID 043 Re-shoring Manufacturing through the Application of Additive Technologies

Christopher Backhouse and Hamid Moradlou, Loughborough University, Leicestershire, United Kingdom

# ID 041 Enhancing Enterprise Performance with Social BPM and TOGAF Framework

Jyhjong Lin, Ming Chuan University, Taoyuan City, Taipei, Taiwan

# ID 055 Improving the manufacturing performance by using the appropriate purchasing strategy

Ahmed Attia, Effat University, Jeddah, Mekka, Saudi Arabia

# ID 210 Customer Orders Prioritization Using Topsis in Multi Business Channel Environment

Muhammad Haris Aziz and Summyia Qamar, University of Engineering and Technology, Taxila, Pakistan Chanchal Saha, Binghamton University, Poughkeepsie, New York, United States Saifullah Khan, Qasim Ali Jahanzaib Mirza, University of Engineering and Technology, Taxila, Pakistan

#### ID 273 Production Efficiency Improvement through Preventive Maintenance and Production Scheduling Optimization

Rahmat Nurcahyo and Amar Rachman, Universitas Indonesia, Depok, Jawa Barat, Indonesia

# **08:00 – 09:15, TUESDAY**

# Supply Chain Management I

Starhill 8

Session Chair: Erdem Aksakal, Gazi University, Ankara, Turkey

#### ID 019 Determinants of the Scope of Supply Chain E-Collaboration

Tesfaye Tolu Feyissa R.R.K. Sharma, Indian Institute of Technology, Kanpur, Uttar Pradesh, India

# ID 191 Improving organizations performance through Supply Chain Quality Management practices

Paulo Sampaio, Maria Carvalho and Ana Cristina Fernandes, University of Minho, Braga, Portugal

# ID 171 Literature review of Physical Delivery Service Quality: type of research and research gap

Teuku Yuri M. Zagloel, Akhmad Hidayatno and Clara Benarto, Industrial Engineering Department, University of Indonesia, Depok, West Java, Indonesia

### ID 683: Designing Personalized Tourism Packages for Oman Tourism Industry

Abdulwahab M., Amur M., Rashid H. and S. Piya, College of Engineering, Sultan Qaboos University, Oman

#### ID 325 Green Supplier Selection under Risk Assessment

Erdem Aksakal and Emre Caliskan, Gazi University, Ankara, Turkey

#### 08:00 - 09:30, TUESDAY

# **Material Flow Cost Accounting**

**Bintang V** 

Session Chair: Wichai Chattinnawat, Chiang Mai University, Thailand

# ID 148 Framework of an '(In) Efficiency Costing' based on the idea of Material Flow Cost Accounting

Ronny Sygulla and Uwe Götze, Technische Universität Chemnitz, Saxony, Germany

### ID 165 How will MFCA make Usefulness on Sustainable Engineering - Based on practical experiences in Japanese and **Southwestern Asian Companies?**

Michiyasu Nakajima and Asako Kimura, Kansai University, Suita-Shi, Osaka, Japan

# ID 215 Application of Material Flow Cost Accounting (MFCA) and Quality Control Tools in Wooden Toys Product

Wasawat Nakkiew and Pattarawadee Poolperm, Department of Industrial Engineering, Chiang Mai University, Thailand

### ID 601 Impact of Introducing Material Flow Cost Accounting: A Comparative Review of Supply Chains and Individual Companies

Kana Okada and Katsuhiko Kokubu, Kobe University, Hyogo, Japan

### ID 351 Application of Material Flow Cost Accounting Analysis to Increase Pajama Production Efficiency: A Case Study of Confederate International Co., Ltd.

Wichai Chattinnawat, Industrial Engineering Department, Chiang Mai University, Thailand

# ID 350 The Limitation of MFCA-based Cost Analysis for Serial Manufacturing Process with Sampling Scheme

Wichai Chattinnawat, Industrial Engineering Department, Chiang Mai University, Thailand

#### Undergraduate Student Paper Competition sponsored by Siemens Bintang VI 08:00 - 09:15, TUESDAY

Session Chair: Abbas Mahmoudabadi, MehrAstan University, Gilan, Iran

# ID 161 An estimation of land price by kriging using geographic information system

Yoichi Shimakawa, Salesian Polytechnic, Machida-shi, Tokyo, Japan

Yutaro Kitamura, Advanced Course in Production Systems Engineering Salesian Polytechnic, Tokyo, Japan

### ID 085 River's Rubbish Catcher Machine (RRC-Machine) - The Planning of a Machine Instrument to Catch the Rubbish in the River towards Healthy Environment

Rendhie Suswanto, Mining Engineering Department, University of Sriwijaya, Inderalaya, South Sumatera, Indonesia

# ID 093 Fuzzy AHP based Multi-Criteria Decisions Support System for Eco-Design

Asela Kulatunga and Chanjief Chandrakumar, Faculty of Engineering, University of Peradeniya, Sri Lanka Senthan Mathavan, School of Mechanical and Manufacturing Engineering, Loughborough University, UK

# ID 176: Assessment on 5S System of Rules in a Cosmetics Manufacturing's Central Weighing Area, Processing and Packaging Area for Creams, Liquids and Lotions (CLL)

Ma. Erika R. Laguardia and Rachel C. Villanueva Department of Industrial Engineering, Malayan Colleges Laguna, Cabuyao Laguna, Philippines

#### **Graduate Student Paper Competition sponsored by EATON** 08:00 - 09:15, TUESDAY

**Bintang VII** 

Session Chair: Dr. Md. Mamun Habib, Asia Graduate School of Business, UNITAR International University, Selangor, Malaysia

# ID 098 Superstructure Optimization of Multiple Gas-Solid Cyclone Arrangements

Ali ElKamel, University of Waterloo, Ontario, Canada

Rois Fatoni, Chemical Engineering Department, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia Muhamad Fariz Failaka, Chemical Engineering Department, University of Waterloo, Ontario, Canada

### ID 391 Similarity Measures and Distance Measures Applications: An Analysis and Design of Systems prospective Osama Rabie, King Abdulaziz University, Jeddah, Saudi Arabia

### ID 408 Design and Manufacturing of Automobile Testing Track Sweeping Machine

Nazish Quadri Syed, College of Pune, Maharashtra, India

#### ID 433 Geometric Chip Analysis of Helical End Milling Based on a Variable Flow Stress Machining Theory

Majed Masmali and Philip Mathew, The University of New South Wales, Sydney, NSW, Australia

#### 08:00 - 09:15, TUESDAY

# Occupational Safety and Health (OSH)

**Mayang Sari I** 

Session Chair: Jafri Rohani, Universiti Teknologi Malaysia

# ID 137 AHP-Based Conceptual Model for Selection of Key Elements for Safety Culture Using SMART Criteria

Shahid Ali and Azmi Mohd Shariff, Universiti Teknologi Petronas, Tronoh, Perak, Malaysia

#### ID 326 Knowledge Management (KM) in Human Error (HE) in Accident Prevention

Ahmad Soyuti Haji Sabran, Sapurakencana Tl Offshore Sdn Bhd, Puchong, Selangor De Malaysia Abdul Rahman Abdul Rahim, UTM Razak School of Engineering and Advanced Technology, Kuala Lumpur, Malaysia

# ID 487 The Level of Safety Culture Beliefs and Practices amongst Safety and Health Officers (Shos) in Malaysian Manufacturing Companies

Rozlina Md Sirat and Jafri Mohd Rohani, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Skudai, Johor Bahru Awaluddin Mohamed Shaharoun and Habibah Haron, UTM Razak School of Engineering and Advanced Technology, UTM KL

#### ID 583 Fire Safety and Availability of Fire Fighting Equipment in Selected Garment Factories in Bangladesh

Mohammad Iqbal, Salma A. Iqbal, Shahjalal University of Science and Technology, Sylhet, Bangladesh Sumayel Mumammad Mallick, Anlima Yarn Dyeing Ltd., Savar, Dhaka, Bangladesh

# ID 486 Estimation of compensation cost related to Musculoskeletal Disorder: Younger versus Older Malaysian Manufacturing Workers

Jafri Rohani, Affandi Mohd Zainal, Mohamed Fitri Johari, Rozlina Md Sirat, Raemy Md Zein and Ismail Abdul Rahman, Universiti Teknologi Malaysia, Senai, Johor, Malaysia

#### 08:00 - 09:15, TUESDAY

# **Data Analytics**

Mayang Sari II

Session Chair: Xin James He, Fairfield University, Fairfield, CT, United States

# ID 061 Integration of Business Process management and Big Data technologies

Christoph Wunck and Alfred Wulff, Jade University of Applied Sciences, Wilhelmshaven, Lower-Saxony, Germany

### ID 142 Categorization of Web News Documents Using Word2Vec and Deep Learning

Hiroyuki Goto and Ryoma Kato, Hosei University, Koganei, Tokyo, Japan

# ID 232 Knowledge extraction from TB patients- A hybrid model with clustering and decision tree

F. Firuzi Jahantigh, Department of Industrial Engineering, University of Sistan and Baluchestan, Zahedan, Iran Hakimeh Ameri, Department of Industrial Engineering, Khaje Nasir Toosi University of Technology, Tehran, Iran

### ID 278 Innovation Clusters and Determinants of Innovativeness in Manufacturing Industries

Mete Sevinc, School of Industrial Engineering, Operations, Planning, Accounting & Control Group, Eindhoven University of Technology, Eindhoven, The Netherlands

Gündüz Ulusoy, Department of Industrial Engineering, Sabanci University, Istanbul, Turkey

# ID 216 Big Data Business Analytics: Attitude and Readiness

Xin James He, Fairfield University, Fairfield, CT, United States

Myron Sheu, California State University, Dominguez Hills, CA, United States

#### 08:00 - 09:15, TUESDAY

# **Case Studies**

Mayang Sari III

Session Chair: Ineta Geipele, Riga Technical University, Riga, Latvia

# ID 046 The importance of learning computer programming for engineers

Carlos Oliveira, Department of Computing, Rio de Janeiro Federal Institute of Education Science and Technology Rio de Janeiro (IFRJ), Brazil

# ID 119 Product-Service System and Inventory Control: Provision in a UK manufacturing case study

Siti Ismail and J.A. Harding, Loughborough University, Leicestershire, United Kingdom

# ID 136 A Study on the Business Strategy of Highly Profitable Electronic Component Manufacturers

Chihiro Sato, Tohoku University, Sendai, Miyagi, Japan

#### ID 332 Importance of Business Incubators for New Business and its Development in Latvia

Ineta Geipele, Linda Kauškale and Iveta Pukite, Riga Technical University, Riga, Latvia

### 08:00 - 09:15, TUESDAY

# **Reliability and Maintenance**

**Mayang Sari IV** 

Session Chair: Annamalai Pandian, Saginaw Valley State University, Michigan, United States

# ID 129 An Optimal Preventive Maintenance Plan According to Power Generation for a Wind Turbine Hajej Zied and Nidhal Rezg, LGIPM, METZ, France

ID 203 A Methodology for Simultaneously Optimizing Selective Maintenance Decision and X-Control Chart Parameters Pravin Tambe, Industrial Engineering Department, RCOEM, Nagpur, India Makarand Kulkarni, IIT Delhi, New Delhi, Delhi, India

# ID 287 Value of Perfect Information in Condition Based Maintenance using Proportional Hazards Models; a comparison of maintenance strategies

Alireza Ghasemi and lireza Farhang Doost, Dalhousie University, Halifax, NS, Canada

#### ID 237 Visual data mining of faults in machining process based on machine learning

Soumaya Yacout, École Polytechnique, Montreal, Quebec, Canada Yasser Shaban, Faculty of Engineering, Helwan University, Cairo, Egypt Jose Luis, Gonzalez Rubio, Madrid, Spain

# ID 040 Manufacturing cell layout improvement using Simulation Modeling and Group Technology

Annamalai Pandian, Saginaw Valley State University, Michigan, United States Ahad Ali, Lawrence Technological University, Southfield, MI, United States

# 09:30 - Welcome Address:

# Professor Datuk Dr. Mohd. Noh bin Dalimin

Vice-Chancellor, Universiti Tun Hussein Onn Malaysia (UTHM) Mayang Sari Grand Ballroom

# 10:00 - Opening Keynote:

Dr. Ronald G. Askin, Professor and Director
School of Computing, Informatics, and Decision Systems Engineering
Arizona State University, Tempe, AZ, USA

Mayang Sari Grand Ballroom

11:00 - Networking Break at Exhibition Hall

### 11:30 – 12:45, TUESDAY

# **Global Engineering Education II**

Starhill 4

Session Chair: Dr. Christoph Wunck, Jade University, Wilhelmshaven, Germany

11:30 - 11:55 (Tuesday)

### Professor Dr. Mushtak Al-Atabi

Dean, School of Engineering Taylor's University Selangor Darul Ehsan, Malaysia

11:55 - 12:20 (Tuesday)

### Professor R. Natarajan

Former Chairman, AICTE

Former Director, IIT Madras, India

Emerging Engineering Education Challenges and Opportunities -- Indian Perspectives

12:20 - 12:45 (Tuesday)

# **Dr. Christoph Wunck**

Professor, Business Computing Systems, Industrial Engineering College of Management, Information, Technology Jade University Wilhelmshaven, Germany

#### 11:30 - 12:45, TUESDAY

# Industry Solutions II

Starhill 5

Session Chair: Dr. Adibah Shuib, Universiti Teknologi MARA (UiTM)

11:30 - 11:55 (Tuesday)

Dr. Adibah Shuib

Head of Strategic Planning (Monitoring) Centre for Strategic Planning Universiti Teknologi MARA (UiTM)

Acting President - MSORMS (Malaysian Society of Operations Research and Management Science)

11:55 - 12:20 (Tuesday)

Dr. Mei Fong Chong

Professor, Faculty of Engineering The University of Nottingham Malaysia Campus Selangor Darul Ehsan, Malaysia

12:20 - 12:45 (Tuesday)

OPEN

#### 11:30 - 12:45, TUESDAY

# Lean Six Sigma Green Belt Workshop

Starhill 6

Dr. Joseph M. Ogundu, MBB

President and CEO – Emerald Global Consulting Inc. West Bloomfield, Michigan, USA

# 11:30 - 12:45, TUESDAY

# **Operations Management II**

Starhill 7

Session Chair: Hiroyuki Goto, Hosei University, Tokyo, Japan

# ID 114 Assessment of Automotive Industry Component Supplier's Competitiveness in South Africa

Mukondeleli Grace Kanakana Katumba and Opeyeolu Timothy Laseinde, Tshwane University of Technology, Pretoria, Gauteng, South Africa

### ID 633 Optimal Control Applied to Dynamic Model of Climate Change: A Bangladesh Scenario

M H A Biswas and Md. Mohidul Hague, Khulna University, Bangladesh

Muhammad Hanif, Noakhali Science and Technology University, Noakhali, Bangladesh

M. Alhaz Uddin, Khulna University Engineering and Technology, Bangladesh

# ID 492 Particle Swarm Optimization for Just-In-Time Trucks Scheduling in Cross Docking Terminals

Warisa Wisittipanich, Department of Industrial Engineering, Chiang Mai University, Muang, Chiang Mai, Thailand

### ID 144 Performance evaluation of a heuristics for the prize collecting Steiner tree problem

Hiroyuki Goto, Yuki Hosokawa and Eishi Chiba, Hosei University, Koganei-shi, Tokyo, Japan

# 11:30 - 12:45, TUESDAY

# **Supply Chain Management II**

Starhill 8

Session Chair: Sinta Sarpani, University of Indonesia, Indonesia

# ID 335 Prepositioning of relief goods under network uncertainty for tropical cyclones with information updates: a humanitarian supply chain

Bryan Gobaco, Miguel Lahoz, Mykhael Ng, and Derrick Sy, Industrial Engineering Department, De La Salle University, Manila, Philippines

### ID 313 Supply Chain Flexibility and Performance under Uncertainty in Indian Automotive Industry

Parveen Farooquie, Aligarh Muslim University (AMU), Aligarh, Uttar Pradesh, India

# ID 401 Supply Chain Risk Management in the Indonesian Flavor Industry: Case Study from a Multinational Flavor Company in Indonesia

Fransisca Dini Ariyanti and Aditya Andika, Industrial Engineering Department, Bina Nusantara University, Jakarta, Indonesia

# ID 559 Designing Process Improvement of Order Fulfillment in an Indonesian Lubricant Company Using Business Process Reengineering Method

Sinta Sarpani, University of Indonesia, Jakarta, South Jakarta, Indonesia

# 11:30 – 13:00, TUESDAY Material Flow Cost Accounting

Bintang V

Session Chair: Chompoonoot Kasemset, Department of industrial engineering, Chaing Mai University, Thailand

# ID 503 Management Control Systems for Material Flow Cost Accounting: A Case of Japanese Company

Hirotsugu Kitada, Faculty of Business Administration, Hosei University, Tokyo, Japan Akira Higashida, Faculty of Business Management, Meijo University, Nagoya, Japan

# ID 149 Material Flow Cost Accounting in Supply Chains - Challenges and Approaches

Ronny Sygulla, Uwe Götze and Fanny Dressel, Technische Universität Chemnitz, Saxony, Germany

### ID 305 Ceramics Process Improvement with Material Flow Cost Accounting

Wimalin Laosiritaworn, Chaing Mai University, Chaing Mai University, Muang, Chiang Mai, Thailand

# ID 349 Application of Material Flow Cost Accounting Analysis to Increase Pajama Production Efficiency: A Case Study of Con

Wichai Chattinnawat, Industrial Engineering Department, Chaing Mai University, Muang, Chiang Mai, Thailand

# ID 469 Application of Material Flow Cost Accounting and System Dynamics Approach for Waste Reduction and Sustainable Food Manufacturing Development in Thailand

Jedsada Tipmontian and Ketinun Kittipongpittaya, King Mongkut's University of Technology, North Bangkok, Muang, Prachinburi, Thailand

Rajmohan Murugesan, Anna University, Chennai, Tamilnadu, India

#### ID 537 Application of MFCA and ECRS in Waste Reduction: A Case Study of Electronic Parts Factory

Chompoonoot Kasemset, Department of industrial engineering, Chaing Mai University, Chiang Mai, Thailand Chawis Boonmee, Division of Sustainable and Environmental Engineering, Muroran Institute of Technology, Hokkaido, Japan

# 11:30 – 12:45, TUESDAY Undergraduate Student Paper Competition sponsored by Siemens Bintang VI

Session Chair: Abbas Mahmoudabadi, MehrAstan University, Gilan, Iran

#### ID 228 Optimal Aggregate Production Planning using Genetic Algorithm

Gaurav Banthia, Ronak Vyas and Juhi Gupta, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, India

### ID 236 An Optimization Model for Managing System Inventories in a Disaster Supply Chain

Charlle Sy, Martin Julian Ongchuan, Steven Ong and Hazel Lynne Lim, De La Salle University, Manila, Philippines

# ID 292 Feasibility Analysis of Indonesian Traditional Shipping Industry to Strengthen Domestic Maritime Logistic System

Rahmat Nurcahyo and Wegit Triantoro, Universitas Indonesia, Depok, West Java, Indonesia

## ID 697 Developing a cost-effective model for evaluating the efficiency of weigh in motion system

Razieh Akbari, Faculty of Economics, Kharazmi University, Iran

Abbas Mahmoudabadi, Master Program in Industrial Engineering (MPIE), MehrAstan University, Gilan, Iran

# 11:30 – 12:45, TUESDAY Graduate Student Paper Competition sponsored by EATON

Bintang VII

Session Chair: Dr. D. Muruganandam, Production Engineering Department, Sri Sairam Engineering College, Chennai, India

### ID 477 A new risk-based dynamic approach for Prioritizing Patients' access to healthcare services

Daoud Ait Kadi, Samira Abbasgholizadeh Rahimi and Angel Ruiz, Université Laval, Quebec, Canada

# ID 500 Determining the Effect of Key Process Parameters on Forming Force of Single Point Incremental Sheet Metal Forming

Abdulmajeed Dabwan, Adham Ragab, Mohammed Saleh and Abdelnaser Daoud, King Saud University, Riaydh, Saudia Arabia

### ID 561 A Prospective Solution for Consistent Aerostatic Lift for a Hybrid Buoyant Aircraft

Anwar Ul Haque, Wagar Asrar, Erwin Sulaeman, and JS Mohamed Ali

Experimental & Computational Thermofluid Mechanics Research Group, ECTMRG, Department of Mechanical Engineering, International Islamic University Malaysia (IIUM), Kuala Lumpur, Malaysia Ashraf Ali Omar, University of Tripoli (UOT), Tripoli, Libya

# ID 382 Feasibility of Implementation of Project Management System in Project Oriented Organizations-A Case Study of Electrical Distribution Company

Amin Lakzadeh, Middle East Mines & Mineral Industries Development Holding Company (MIDHCO), Kerman, Alghadir, Iran

### ID 135 In-house Crowdsourcing-Based Entity Resolution Using Argumentation

Morteza Saberi, Naeem Khalid Janjua, Elizabeth Chang and Omar Khadeer Hussain, School of Business, UNSW Canberra, Australia

Peiman Pazhoheshfar, Young Researchers and Elite Club, Arak Branch, Islamic Azad University, Arak, Iran

# 11:30 – 12:45, TUESDAY Human Factors and Ergonomics

Mayang Sari I

Session Chair: Pratima Verma, IIT Kanpur, India

### ID 079 Czech students' perception of careers in the Shared Services industry

Oksana Koval and Stephen Nabareseh, Tomas Bata University in Zlin, Czech Republic

# ID 177 Multiple Performance Optimization forHuman-Robot Collaboration: a Translation Motion in a Tele-Sandblasting Maintenance System

Ranon Jientrakul and Chumpol Yuangyai, King Mongkut's Institute of Technology, Ladkrabang, Bangkok, Thailand

#### ID 164 Ergonomics as a Lean Manufacturing Tool for Improvements in a Manufacturing Company

Rosnah Mohd Yusuff and Nor Suhada Abdullah, Universiti Putra Malaysia, Serdang, Selangor, Malaysia

# ID 201 Structure, Evaluation System, and Employee Resistance: Impediments to Horizontal Strategy Implementation in Diversified Corporations

Pratima Verma, IIT Kanpur, UP, India

# 11:30 – 12:45, TUESDAY Data Analytics

Mayang Sari II

Session Chair: Koorosh Mashhadi Alizadeh, Sadjad University of Technology, Mashhad, Iran

# ID 320 Application of Text Mining for Classification of Textual Reports: A Study of Indonesia's National Complaint Handling System

Isti Surjandari, Chyntia Megawati, Arian Dhini and I.B.N. Sanditya Hardaya, Universitas Indonesia, Depok, Indonesia

# ID 387 In search of Malaysian companies with successful implementation of business intelligence initiatives

Wong Kee-Luen and Chuah Min-Hooi, Universiti Tunku Abdul Rahman, Kampar, Perak, Malaysia

# ID 538 Crime Trend Analysis by Changes of Spatial Autocorrelation and Hot-spot

Hohyun Lee and Dain Kim, Paul Math School, Goesan-gun, Chungcheongbuk-do, Korea

# ID 127 Driving safety performance in the construction industry through safety induction and training – as a leading measure

Natalie Skeepers and Charles Mbohwa, University of Johannesburg, South Africa

### ID 429 Building Information Modeling (BIM): A Study to Prioritize Applications, Risks and Challenges

Koorosh Mashhadi Alizadeh, Department of Industrial Engineering, Sadjad University of Technology, Mashhad, Iran Jalal Sani Bajgiran, Day Company, Tehran, Iran

Ebrahim Rezaee Nik, Department of Industrial Engineering, Sadjad University of Technology, Mashhad, Iran

### 11:30 - 12:45, TUESDAY

# Case Studies

Mayang Sari III

Session Chair: Sanda Geipele, Riga Technical University, Latvia

# ID 329 Energy Efficiency Improvement Opportunities in Latvia as a Sustainable Development Indicator Ineta Geipele, Linda Kauškale and Iveta Pukite, Riga Technical University, Latvia

**ID 498** A Build-or-Lease Case Study for a Potential New Warehouse Due To Increasing Storage Capacity Requirements Denis Daus, Chiang Mai University, Lübbecke, NRW, Germany

#### ID 567 The Impact of Lack in Occupational Health and Safety Implementation in Small Businesses

Charles Mbohwa and Sebonkile Thaba, University of Johannesburg, South Africa

#### ID 481 Financial Inclusion in Colombia: Evolution and Relative Efficiency

Gloria Rodriguez-Lozano, Universidad Nacional de Colombia, Bogota, Colombia

# ID 359 Management of energy efficient processes in residential and public buildings at regional level: A Case Study of Latvia

Sanda Geipele, Institute of Civil Engineering and Real Estate Economics, Riga Technical University, Riga, Latvia Gita Actina, Institute of Physical Energetics, Energy Efficiency Center, Riga, Latvia

# 11:30 – 12:45, TUESDAY Transportation and Traffic

Mayang Sari IV

Session Chair: Yoichi Shimakawa, Salesian Polytechnic, Machida-shi, Tokyo, Japan

#### ID 024 A Proposed Hybrid Scheme for Eliminating Road Transportation Waste

Bernardo Villarreal, Universidad de Monterrey, San Pedro Garza Garcia Nuevo Leon, Mexico

# ID 042 A Two-stage Stochastic Programming Model for Districting and Transportation Lot-size of Sugarcane

Kanchala Sudtachat, Suranaree University of Technogogy, Muange, Nakhon Ratchasima, Thailand

# ID 113 An investigation into the urban bus route performance using a modified DEA Model: A case study of Kolkata bus transport

Arnab Adhikari and Sumanta Basu, Indian Institute of Management Calcutta, Kolkata, West Bengal, India Indranil Biswas, Operations Management Area, Indian Institute of Management Lucknow, Prabandh Nagar, Lucknow, India

# ID 130 An Analytical Framework for Local Impacts of Road Pricing Policy: A Case Study of the Tokyo Metropolitan Area

Yoichi Shimakawa, Salesian Polytechnic, Machida-shi, Tokyo, Japan

Hiroyuki Goto, Hosei University, Koganei, Tokyo, Japan

Hirotaka Takahashi and Yasushi Sumitani, Department of Information and Management Systems Engineering, Nagaoka University of Technology, Nagaoka, Niigata, Japan

# 1:00 pm – Industry Keynote: Dr. Anwar Ali Mohamed

O.R. Freelance Consultant, Penang, Malaysia and Former Principal Engineer at Intel Malaysia
Mayang Sari Grand Ballroom (Boxed Lunches Provided)

2:00 pm - Networking Break at Exhibition Hall

# 2:30 – 3:45, TUESDAY Global Eng

# **Global Engineering Education III**

Starhill 4

Session Chair: Dr. Mohammad Yeakub Ali, International Islamic University Malaysia

2:30 - 2:55 (Tuesday)

Dr. Alok Verma

Ray Ferrari Professor and Chair Department of Engineering Technology

Old Dominion University, Norfolk, Virginia, USA

2:55 - 3:20 (Tuesday)

### Dr. Ramiro Jordan

Professor and Associate Dean of Engineering for International Programs Department of Electrical and Computer Engineering University of New Mexico ISTEC founder, IFEES ExCom

3:20 – 3:45 (Tuesday)

Dr. Mohammad Yeakub Ali

Professor and Head

Department of Manufacturing and Materials Engineering, Faculty of Engineering International Islamic University Malaysia, Kuala Lumpur, Malaysia

#### 2:30 - 3:45, TUESDAY

# **Industry Solutions III**

Starhill 5

Session Chair: Kishor Kulkarni, Tata Technology, Pune, India

2:30 - 2:55

### Reza Mesgarian

Head of Process Engineering

National Iranian Gas Company, Tehran, Iran

ID 251: Use of Low Heating Value Natural Gas by Blending With Fuel Gas

2:55 - 3:20

#### **Hakan Butuner**

MECO Industrial Management & Engineering Co.

Istanbul, Turkey

ID 008 Systematic Competency Based Training Needs Analysis

3:20 - 3:45

#### Kishor Kulkarni

Sr. Project Engineer

Tata Technology, Pune, India

2:30 - 3:45, TUESDAY

# Lean Six Sigma Green Belt Workshop

Starhill 6

Dr. Joseph M. Ogundu, MBB

President and CEO – Emerald Global Consulting Inc. West Bloomfield, Michigan, USA

#### 2:30 - 3:45, TUESDAY

# **Operations Management III**

Starhill 7

Session Chair: Artie Ng, Hong Kong Polytechnic University

**ID 146** Resolution of Resource Contentions in the Critical Chain Project Management based on Simulated Annealing Hiroyuki Goto and Hajime Yokoyama, Hosei University, Koganei, Tokyo, Japan

ID 152 Performance Measurement System and Business Performance Measurement System: A Comparative Study Shahryar Sorooshian, Nor Mahirah Mustapha and Azlinna Azizan, Universiti Malaysia Pahang, Kuantan, Pahang, Malaysia

### ID 263 Improvement of Master Production Planning in a Semi-Conductor Manufacturer

Waralak Maneefun and Parames Chutima, Chulalongkorn University, Bangkok, Thailand

ID 272 Use of Interdiction Models to evaluate the Robustness of two Echelon Supply Chain for Minimum Service level Priyank Sinha, IIT Kanpur, Kanpur, Utter Pradesh, India

### ID 336 Competitive Revenue Management Model Using Dynamic Pricing for Theater Seats Management

Lindley Bacudio, Rose Angel Lizardo and Eunice Austria, De La Salle University - Science and Technology Complex Binan, Laguna Philippines

**ID 290** Second-movers' advantage under the Big Data era: sustainability performance through disruptive innovation Artie Ng, Adam Wong and Edmund Wut, Hong Kong Polytechnic University, Hong Kong, China

#### 2:30 - 3:45, TUESDAY

# Supply Chain Management III

Starhill 8

Session Chair: Mohammad Rizal Firmansyah, University of South Australia

# ID 419 Applying the Analytical Hierarchy Process to Determine Upstream Competitiveness for Wedding-Planning Industry

Grisna Anggadwita, Cut Irna Setiawati, Yuhana Astuti and Bayu Rachmadi, School of Economic and Business, Telkom University, Bandung, West Java, Indonesia

# ID 463 "Performance Evaluation" & "Problems Identifications in Warehouses" of Third-Party Logistics

Ghulam Yasin Shaikh, Muhammad Aijazuddin, Abu Bakar, Shamir Ali, Muhammad Amir and Moin Khan, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan

# ID 505 Addressing Supply Chain Configuration Practices: Evidence from Italian Best Performer Valve Suppliers for the Oil & Gas Industry

Guido Jacopo Luca Micheli, Enrico Cagno, Filippo S.P.M. Manzi and Yasmine Sabri, Politecnico di Milano, Italy

# ID 558 Assessing the effect of implementing a port community system platform in the response time of an international terminal: the case of a multi-cargo facility at the Colombian Caribbean coast

Rene Amaya, Adriana Moros, Guisselle Garcia and Carlos Paternina, Universidad del Norte, Barranquilla, Atlántico, Colombia

# ID 581 The development of a framework for Australian SMMEs collaboration in a global supply chain environment, Part 2: Genetic operators and a case study

Mohammad Rizal Firmansyah, University of South Australia, Mawson Lakes, Adelaide, South Australia, Australia

# 2:30 – 3:45, TUESDAY Manufacturing and Design

Bintang V

Session Chair: Indi Galih, Universitas Indonesia

# ID 185: Improvement of Productivity Rate of JIT #262, Creams, Liquids, Lotions Department of a Cosmetics Company Ezrha C. Godilano and Rachel C. Villanueva Department of Industrial Engineering, Malayan Colleges Laguna, Cabuyao Laguna, Philippines

# ID 175 Effect of Sintering Temperature on Hydroxyapatite Compact Scaffold Characteristics

Wassanai Wattanutchariya, Jidapah Ruennareenard and Anirut Chaijaruwanich, Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Muang, Chiang Mai, Thailand

# ID 214 Social Network Analysis Based Evolutionary Algorithimic Approach to Identify the Influence of Hubs on Flexible Scheduling Problems

Vijayakumar Manupati and Ila Sharma, VIT University, Vellore, TamilNadu, India

### ID 223 System of decision-making assistance for the recycling manufactured products

Mickael Gardoni, ÉTS, Montréal, Canada Gaye Khalifa, University Assane Seck of Ziguinchor, Senegal Amadou Coulibaly, INSA Strasbourg, France

#### ID 317 Designing Laptop Based On Costumer Preference Using ECQFD and TRIZ Methods

Amalia Suzianti, Irham Satria, Shabila Anjani and Indi Galih, Universitas Indonesia, Depok, Jawa Barat, Indonesia

# 2:30 – 3:45, TUESDAY Undergraduate Student Paper Competition sponsored by Siemens Bintang VI

Session Chair: Abbas Mahmoudabadi, MehrAstan University, Gilan, Iran

### ID 400 Optimization of Warehouse Operations for Logistics Company in the Philippines

Stephanie B. Duque, Maricar M. Navarro, Bernaliza O. Verrey, Jovale C. Vitao, Sherilyn M. Zantua, Rosalia F. Gabuya, Industrial Engineering Department, Technological Institute of the Philippines, Quezon City, Philippines

### ID 635 Adjustable Turning Radius Steering Mechanism (Chandok's Raft Steering System)

Navpreet Singh, CGC-College of Engineering, India

#### ID 512 Developing a Multi-objective Model for Locating a New Warehouse for Bama's Chain Store

Maral Siahpour, Ferdowsi University, Mashhad, KHorasan Razavie, Iran

# **ID 421** Consideration of economics and ergonomics aspects in the design and manufacturing of Hydraulic Floor crane Abdul Wahid, Shakil Shakih, Muhammad Ibrahim Khan, Shahzain Akram and Syed Muhammad Hassan, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan

# 2:30 – 3:45, TUESDAY Ph.D. Dissertation Research Presentation Competition

**Bintang VII** 

Session Chair: Dr. Seifedine Kadry, American University of the Middle East in Kuwait

# ID 100 Design of Single-Phase Grid-Connected Based on Dual-MPPT for Photovoltaic Generation Systems

Slamet Kasbi, Rasli bin Abd Ghani and Fuminori Kobayashi, Malaysia – Japan International Institute of Technology (MJIIT), University Teknologi Malaysia Kuala Lumpur, Kuala Lumpur, Malaysia

#### ID 134 Next Generation of Interactive contact centre for efficient customer recognition

Morteza Saberi, Curtin University of Technology, Perth, Australia

Omar Khadeer Hussain and Elizabeth Chang, UNSW Canberra, Australia

# ID 323 A Hybrid Particle Swarm Optimization Algorithm and Support Vector Machine Model for Agricultural Statistic of Thailand Forecasting

Onuma Kosanan and Nantachai Kantanantha, Department of Industrial Engineering, Faculty of Engineering, Kasetsart University (Bangkhen Campus), Chatuchak, Bangkok, Thailand

# ID 677 Exploring Critical Success Factors for TQM Implementation Using Interpretive Structural Modelling Approach: Extract from Case Studies

Vimal Kumar, IIT Kanpur, India

ID 678 The Linkages between Horizontal Strategy, Person-Environment fit and Horizontal Fit: An Empirical study Pratima Verma, IIT Kanpur, India

#### 2:30 - 4:00, TUESDAY

# **Human Factors and Ergonomics**

Mayang Sari I

Session Chair: Seiko Taki, Chiba Institute of Technology, Narashino, Chiba, Japan

#### ID 194 Fatigue from driving – a comparison between morning and afternoon tasks

Rida Zuraida, Bina Nusantara University, Jakarta Barat, DKI Jakarta, Indonesia Hardianto Iridiastadi and Iftikar Z.Sutalaksana, Institut Teknologi Bandung, Jawa Barat, Indonesia

#### ID 243 Workplace Ergonomics and Employees' Health: A Case Study at Automotive Manufacturer

Nor Hazana Abdullah, Alina Shamsuddin, Nor Aziati Abdul Hamid, Eta Wahab and Nor Kamariah Kamaruddin, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

### ID 291 Ergonomic Risk Factors for Workers in Garments Manufacturing – A Case Study from Pakistan

Zahid Abbass Shah, Asim Amjad, Maria Ashraf, Fareeha Mushtaq and Iram A. Sheikh, University of the Punjab, New Campus, Lahore, Punjab, Pakistan

### ID 086 Effects of Different Interruptions While Driving for Field Independent and Dependent Individuals

Rene Estember, Kevin Kristoffer Balares and Ma. Janice Gumasing, Mapua Institue of Technology, Manila, Philippines

### ID 343 Human Error in Multitasking Environments

Ali Ahmad, Northwestern State University, Natchitoches, LA, United States

Saber Darmoul, Abdulmajeed Dabwan, and Mohammed Alkahtani, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia

Shatha Samman, Global Assessment, Inc., Orlando, Florida, USA

### ID 376 Study on Life Log of Female Parent during Child Care in Japan

Seiko Taki, Chiba Institute of Technology, Narashino, Chiba, Japan

#### 2:30 - 3:45, TUESDAY

# **Data Analytics**

Mayang Sari II

Session Chair: Ainul Akmar Mokhtar, Universiti Teknologi Petronas, Malaysia

# ID 150 Development of Effective Marketing Strategies for a Housing Equipment Company Based on Analysis of Sales Data and Sales Personnel

Kakunoshin Nishiyama, Graduate School of Business Administration, Keio University, Chuo-ku, Tokyo, Japan Ushio Sumita, Keio University, Yokohama, Kanagawa, Japan

# ID 151 Structural Analysis of Page Access Behaviors of Sessions at Website of a Housing Equipment Company Ushio Sumita and Mikio Komatsu, Keio University, Yokohama, Kanagawa, Japan

#### ID 254 Class-Time Utilization in Business Schools in Tunisia

Omar Ben-Ayed, Qatar University, Doha, Qatar

Hedia Lahmar and Raoudha Kammoun, College of Economics and Management (FSEGS), University of Sfax, Sfax, Tunisia

# **ID 154** Analysis of VOC (Voice of Customer) Data for Assessing Corporate Image of a Housing Equipment Company Ushio Sumita and Hiroaki Takagi, Keio University, Yokohama, Kanagawa, Japan

# **ID 488** Application of Logistic Regression in Resolving Influential Risk Factors Subject to Corrosion under Insulation Ainul Akmar Mokhtar, Masdi Muhammad and Nurul Rawaida Ain Burhani and Mokhtar Che Ismail, Universiti Teknologi Petronas, Tronoh, Perak, Malaysia

### 2:30 - 3:45, TUESDAY

# **Construction Management**

**Mayang Sari III** 

Session Chair: Ineta Geipele, Riga Technical University, Latvia

# ID 123 Improving health and safety in the construction industry through cultural transformation

Natalie Skeepers and Charles Mbohwa, University of Johannesburg, South Africa

### ID 407 A Risk Management Framework for Selling a Mega Power Plant Project in a New Market

Negar Ganjouhaghighi and Amirali Dolatshahi, Mapna Group, Tehran, Iran

### ID 534 Genetic Algorithms for Two-Phase Construction Dynamic Site Layout

Amr Fathy and Ibrahim Abotaleb, The American University in Cairo, Egypt

# ID 448 Comparative Study of Procurement System between Industrialised Building System (lbs) and Conventional Construction

Natasha Dzulkalnine, Construction Research Institute of Malaysia (CREAM), Kuala Lumpur, Malaysia

# ID 227 Influence of Economic and Real Estate Market Fluctuations on Real Estate Entrepreneurship in Latvia

Ineta Geipele and Linda Kauškale, Riga Technical University, Riga, Latvia

# ID 247 Real Estate Investment Management and Macroeconomic Sustainability: Case of Latvia and International Experience

Ineta Geipele and Linda Kauškale, Riga Technical University, Riga, Latvia

#### 2:30 - 3:45, TUESDAY

# **Transportation and Traffic**

Mayang Sari IV

Session Chair: Shao Hung Goh, SIM University, Singapore

### ID 324 A Multi Objective Robust Model for Capacity-Constraint Hub-Covering Flow Problem

Sogol Saremi, Industrial Engineering School, Iran University of Science & Technology, Tehran, Iran Hani Shahmoradi-Moghaddam, Industrial Engineering Department, University of Tehran, Tehran, Iran Armin Jabbarzadeh, Industrial Engineering School, Iran University of Science & Technology, Tehran, Iran

# ID 548 Waiting Time Duration-Constrained Close-Open Mixed Vehicle Routing Problem with Semi Soft Time Window Solved by Genetic algorithm and Tabu Search

Mehdi Seifbarghy, Alzahra University, Tahran, Iran Mojhgan Hafezinia, Qazvin, Iran

# ID 026 Using Tolerated Risk for Solving Hazardous Material Routing Problem by Preemptive Goal Programming Approach

Abbas Mahmoudabadi, MehrAstan University, Astaneh Ashrafieh, Gilan, Iran Hassan Abdoos, Road Maintenance and Transport Organization, Tehran, Iran Roozbeh Azizmohammadi, Department of Industrial Engineering, Payame Noor University, Tehran, Iran

# **ID 649** Optimization of Shifting Cycle of SKUs by Developing Suggested Opeating Procedure (SOP) in a FMCG Industry Ghulam Yasin Shaikh, Muhammad Zulfiqar, Jazib Zai, Zahid Ali Abbasi and Mohsin Sheikh, Mehran University of Engineering and Technology, Jamshoro, Hyderabad, Sindh, Pakistan

# ID 156 Commercial Viability of Foldable Ocean Containers

Shao Hung Goh, SIM University, Singapore

15:45 - Break

### 4:00 - 5:15, TUESDAY

# Global Engineering Education IV

Starhill 4

Session Chair: Dr. Ayham Jaaron, An-Najah National University, Palestine

4:00 - 4:30 (Tuesday)

# Dr. Chan Chee-Ming

Associate Professor and Deputy Dean (Academic and Research)

Centre for Graduate Studies

Universiti Tun Hussein Onn Malaysia

Batu Pahat, Johor, Malaysia

ID 717: Engineering Postgraduate Students' Perspective on Their Preparedness for the Job Market: Employability Attributes

4:30 - 5:00 (Tuesday)

Dr. Ayham Jaaron

Asst. Prof. in Industrial Engineering Director of Quality Assurance Unit Director of ABET Centre An-Najah National University Nablus, West Bank Palestine

5:00 – 5:30 (Tuesday) **Prof. Dr. Gunduz Ulusoy**Faculty of Engineering and Natural Sciences
Sabanci University
Orhanli, Tuzla
Istanbul, Turkey

4:00 - 7:00, TUESDAY

# **Industry Solutions IV**

Starhill 5

# **Big Data in Manufacturing and Service Industry**

4:00 - 7:00 pm (Tuesday)

# Dr. Andrew Kusiak

Intelligent Systems Laboratory
Professor, Department of Mechanical and Industrial Engineering
The University of Iowa
Iowa City, Iowa, USA

4:00 - 5:15, TUESDAY

# Lean Six Sigma Green Belt Workshop

Starhill 6

Dr. Joseph M. Ogundu, MBB
President and CEO – Emerald Global Consulting Inc.
West Bloomfield, Michigan, USA

4:00 - 5:15, TUESDAY

# **Operations Management IV**

Starhill 7

Session Chair: Nor Aziati Abdul Hamid, Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia

### ID 357 Optimization Model for Advertisement Decision a Case of Cooperative Dairy

Anubha Rautel, Nishith Mohan, S. K. Sharma and P. Bhardwaj, Indian Institute of Technology -BHU, Uttar Pradesh, India

ID 304 Can Resource Sharing Improve Disaster Response Effectiveness? Evidence from West Sumatra Earthquake Eko Setiawan, Universitas Muhammadiyah Surakarta Birmingham, West Midlands, United Kingdom

### ID 366 Performance Measurement in PT. XYZ Using the Balanced Scorecard - A Case Study of PT. XYZ)

Ig Jaka Mulyana, Lien Tjiang, Martinus Edy and Van Gunawan, Industrial Engineering Department Widya Mandala Surabaya Catholic University, Surabaya, East Java, Indonesia

# ID 369 Improving the quality of public transportation using Quality Function Deployment and Kano's Model Anjar Priyono, Universitas Islam Indonesia, Yogyakarta, Indonesia

# ID 572 A new heuristic algorithm to solve product-service mix analysis in mobile bottleneck environments with shared resources based on GTBM method

Eldon Caldwell, University of Costa Rica, San Jose, Costa Rica

#### 4:00 - 5:15, TUESDAY

# Supply Chain Management IV

Starhill 8

Session Chair: Dr. D. Muruganandam, Production Engineering Department, Sri Sairam Engineering College, Chennai, India

### ID 020 Relating Supply Chain E-Integration to Organizational Strategy

Tesfaye Tolu Feyissa and R.R.K. Sharma, Indian Institute of Technology, Kanpur, UP, India

#### ID 039 Optimization of Excess and Waste of Closed Loop Supply Chain System by Using Fuzzy Model

Reiam Basim Mohamed, Department of Mechanical Engineering, Engineering College, Baghdad University, Iraq Zuhair Issa Ahmed, Dean Bani University College, Baghdad, Iraq

# ID 147 Supply Chain Management of Thai Parboiled Rice for Export

Wassanai Wattanutchariya, Department of Industrial Engineering, Faculty of Engineering Chiang Mai University, Thailand Roengchai Tansuchat, Faculty of Economics, Chiang Mai University, Thailand

Jidapah Ruennareenard, Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Thailand

### ID 153 Networked RFID based Supply Chain Process Analysis

Tatsuya Inaba, Kanagawa Institute of Technology, Atsugi, Kanagawa, Japan

#### 4:00 - 5:15, TUESDAY

# **Manufacturing and Design**

Bintang V

Session Chair: Sahil Nanda, Delhi Technological University, India

### ID 363 Improvement of the manufacturing process of the salicylic acid

Gerardo Avendano, Maritza Reyes and Baudilio Acevedo, Universidad EAN, Bogota, Cundinamarca, Colombia

# ID 462 Copper Sheet Resistance characteristics in the production staging time limitation study between Copper Seed and Copper Electroplating in Semiconductor Wafer manufacturing

Mohd Razali Muhamad, Universiti Teknikal Malaysia Melaka, Malaysia Anuar Fadzil Ahmad, Silterra Malaysia Sdn Bhd, Kulim, Kedah, Malaysia Zarifah Syazana Hashim, Universiti Teknikal Malaysia Melaka (UTeM), Kulim, Kedah, Malaysia Md Nizam Abdul Rahman, Universiti Teknikal Malaysia Melaka, Durian, Tunggal, Melaka, Malaysia

#### ID 480 Investigation of surface integrity in high speed machining of Ti6Al4V alloy

Amir Rasti, Mohammad Hossein Sadeghi and Hamed Hassanpour, Tarbiat Modares University, Tehran, Iran

# ID 526 Grey fuzzy optimization of cutting parameters on Material Removal Rate and Surface Roughness of Aluminium Sahil Nanda, Shubham Singhal, Rushil Batra and Ranganath M. Singari, Delhi Technological University, New Delhi, Delhi, India

#### 4:00 - 5:15, TUESDAY

### **Case Studies**

**Bintang VI** 

Session Chair: Md. Mizanur Rahman, Universiti Malaysia Sabah

### ID 235 Priority Determination of the Renewable Energies Using Fuzzy Group VIKOR Method; Case Study Iran

Mohammad Reza Feylizadeh and Mohammad Ali Dehghani, Islamic Azad University, Shiraz, Fars, Iran

#### ID 289 Dynamic capabilities and their direct impact on firm's Performance

Makhala M. Motebele and Charles Mbohwa, Department of Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa

# ID 611 The Impact on the Operational Performance of Manufacturing Implementation Strategies

Makhala Mpho Motebele and Charles Mbohwa, Department of Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa

#### ID 288: Evaluate Performance of Earth – Air – Pipe System under Laboratory Condition

Md. Mizanur Rahman, Ling Leh Sung. Fadzlita Mohd. Tamiri and Mohd Suffian Bin Misaran, Mechanical Engineering Program, Faculty of Engineering, Universiti Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia

### 4:00 - 5:15, TUESDAY

# Ph.D. Dissertation Research Presentation Competition

**Bintang VII** 

Session Chair: Michael Mutingi, University of Botswana

# ID 334 A Framework for Improving Productivity of SMEs Economically

Suman Samanta, IIT Kanpur, Kanpur, Uttar Pradesh, India

# ID 509 Deployment of Virtualization Technology for Higher Engineering Education Data Communication Laboratory Zulfigar Ali, Royal Comission, Yanbu Al Sinayah, Madinah, Saudi Arabia

Raed Althomali, Yanbu Industrial College-YIC, Yanbu Al Sinaiyah, Madinah, Saudi Arabia

# ID 527 Design, Connection, Configuration and Testing of a Mini Data Center for Higher Engineering Technology Institute Lab

Zulfiqar Ali, Royal Comission, Yanbu Al Sinayah, Madinah, Saudi Arabia

#### ID 576 Solutions to ammoniacal nitrogen presence in CMP effluent from oxide process

Mohamed Ariff Shri Abdul Aziz, Muhammad Asyraf Said, Ahmad Termizi Awang and Sulong Mamat, SilTerra Malaysia Sdn Bhd, Kulim, Kedah, Malaysia

Abdul Talib Din, Universiti Teknikal Malaysia (UTEM), Durian, Tunggal, Melaka, Malaysia

### ID 598 Fuzzy heuristic approaches for healthcare staff scheduling

Michael Mutingi, University of Botswana, Gaborone, Botswana

# 4:00 – 5:15, TUESDAY Human Factors and Ergonomics

Mayang Sari I

Session Chair: Hakan Butuner, IMECO Industrial Management & Engineering Co., Istanbul, Turkey

#### ID 569 Gripping Strength Distribution among Middle Eastern Teenage and Young Adults

Abdalla Alrashan, Alfaisal University, Riyadh, Saudi Arabia Ali Mohamed, Prism Group Inc., Windsor, ON, Canada

### ID 599 Sonographer Ergonomics: Assessment and workplace redesign

Anchal Patil, IIT Delhi, New Delhi, Delhi, India

# ID 651 The Relationship between Leadership Styles and Quality Management Practices in Johor Bahru Manufacturing Firms

Shiau Wei Chan and Parit Raja, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

# ID 112 Car Drivers with Higher Perceived Safety Tend To Drive Their Vehicles with Higher Risk - A Unique Phenomenon on the Roads in Jakarta, Indonesia

Hwi-Chie Ho and Dyah Lestari Widaningrum, Bina Nusantara University, Jakarta, Jakarta Raya, Indonesia

# ID 190 HR Practices and organizational commitment among SME employees which leads to retention

Vimala Kadiresan, Mehrunishah Begum Bt vps Bathusha Hamind, Mohamad Hisyam Bin Selamat and Neeta Jayabalan, Faculty of Business, Accounting and Management (FOBAM), SEGi University, Kota Damansara, Petaling Jaya, Malaysia Shaheen Mansori, Faculty of Business, Communications and Law, INTI International University, Bandar Baru Nilai, Negeri Sembilan, Malaysia

### 4:00 - 5:30, TUESDAY

#### **Decision Sciences**

**Mayang Sari II** 

Session Chair: Saber Darmoul, King Saud University, Riyadh, Saudi Arabia

# ID 015 Framework for Decision Support Tool for Quality Control and Management in Botswana Manufacturing Companies

Mogale Sabone, Botswana International University of Science and Technology, Gaborone, South East, Botswana

### ID 047 A Game-Theoretic Approach to Digital Marketing and Lead Generation for Duopoly Markets

Antonio Grilo, Diogo Mota and Marta Faias, FCT-UNL, Alverca, Lisboa, Portugal

# ID 250 A Decision Support Model for Spare Parts Inventory in a Multi-Echelon Closed Loop Supply Chain

Charlle Sy, De La Salle University, Manila, Philippines

#### ID 269 Fuzzy Extent Analysis: Comparison of Defuzzification Methods

Kemal Kilic and Faran Ahmed, Sabanci University, Istanbul, Turkey

# ID 348 Manufacturing configuration selection under arduous working conditions: A multi-criteria decision approach

Saber Darmoul, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia Sonia Hajri-Gabouj and Souhir Ben Cheikh, INSAT, Tunis, Tunisia

#### 4:00 - 5:15, TUESDAY

# **Engineering Management**

**Mayang Sari III** 

Session Chair: Ceicalia Tesavrita, UNPAR, Bandung, West Java, Indonesia

ID 198 Supporting Decisions on Industrial Plant Modularization: A Case Study Approach in the Oil and Gas Sector Mauro Mancini, Angelica Magagnini, Alessandro Bondi, Guido Jacopo Luca Micheli and Agnese Travaglini, Politecnico di Milano, Milan, Italy

#### ID 009 From Traditional to Modern Manufacturing System: Case Study

Charles Mbohwa and Ignatio Madanhire, University of Johannesburg, South Africa

# ID 110 A Way Forward to Attain Lean Manufacturing Status through Transformational Leadership Syed Masood, International Islamic University, Islamabad, Pakistan

# ID 411 Implementation of computerized Preventive Maintenance in Sur construction PLC

Rezene Kahsay Hagos, Mekelle University, Ethiopia

ID 178 Analyzing Technical and Social Dimension in Knowledge Sharing Intention Behavior in E-learning System Ceicalia Tesavrita and Ike Mercia Yusuf, UNPAR, Bandung, West Java, Indonesia

#### 4:00 - 5:15, TUESDAY

# **Technology Management**

Mayang Sari IV

Session Chair: Noorliza Karia, Universiti Sains Malaysia

# ID 141 The Impact of ICT Usage on Collaborative Product Development Performance: A Conceptual Model and Industry Perspective

Chathurani Silva and Sanjay Mathrani, Massey University, Albany, Auckland, New Zealand Nihal Jayamaha, Massey University, Palmerston North, Manawatu, New Zealand

#### ID 394 Challenges of wastewater discharge and techniques for treatment: a review

Zerihun Asmelash Samuel, Tilahun Seyoum Workneh and Cristina Trois, School of Engineering, University of KwaZulu-Natal, PMB. South Africa

Fekadu Fufa Feyess, Jimma Institute of Technology, Jimma University, Ethiopia

# ID 436 Key RFID implementation factors affecting "sourcing" decision of RFID systems in supply chain of manufacturing industry

Niraj Kumar Vishvakarma Indian Institute of Technology, Kanpur Kanpur Uttar Pradesh India.

R.R.K. Sharma Indian Institute of Technology Kanpur, UP, India

#### ID 441 Firm's Policy Management by using ERP system

Thanyawan Soonthornvipat, Vorapoch Angkasith and Dhiranantha Rithmanee, King Mongkut's University of Technology Thonburi, Bangkok, Thailand

# ID 557 Enterprise Resource Planning (ERP) Systems in the Egyptian Higher Education Institutions: Benefits, Challenges and Issues

Noorliza Karia and Mohamed Soliman, Universiti Sains Malaysia, Penang, Malaysia

5:30 – Poster Session and IEOM Student and Professional Chapter Mixer

# March 9, 2016 (Wednesday)

08:00 - 09:15, WEDNESDAY

# **Global Engineering Education V**

Starhill 4

Session Chair: Dr. C. B. Gupta, Birla Institute of Technology and Science, Pilani (Raj.), India

08:00 - 08:25 (Wednesday)

Engr. Prof. Adagbonyin Moses O. Obiazi

Dean, Faculty of Engineering and Technology

Ambrose Alli University, Nigeria

President, African Engineering Deans Council, AEDC

08:25 - 08:50 (Wednesday)

Dr. C. B. Gupta

Professor, Department of Mathematics Birla Institute of Technology and Science

Pilani (Raj.), India

08:50 - 09:15 (Wednesday)

Dr. Jafri Mohd Rohani

Head of the Industrial Engineering Programme
Department of Materials, Industrial and Manufacturing Engineering
Faculty of Mechanical Engineering

Universiti Teknologi Malaysia Skudai, Johor, Malaysia

# 08:00 - 09:15, WEDNESDAY

# **Industry Solutions V**

Starhill 5

Session Chair: Md. Kawsar Ali, Comfit Composite Knit Ltd., Bangladesh

8:00 - 8:25 am

# Arumugam Manikam

Silterra (M) Sdn.Bhd, Kulim

Kedah, Malaysia

ID 627 Yield Improvement of Wafer Edge Die Defocus (EDD) at Via Layer

8:25 - 8:50 am

### Vivek Sundar Magesh

TVS Logistics Services Limited

Chennai, India

ID 218 Maximising Revenues in the "Tatkal" Category of Indian Railways

8:50 - 9:15 am

# Md Kawsar Ali

Chief Operating Officer
Comfit Composite Knit LTD

Gorai, Mirzapur, Tangail

Dhaka, Bangladesh

### 08:00 - 09:15. WEDNESDAY

# **Operations Management V**

Starhill 6

Session Chair: Makhala Mpho Motebele, University of Johannesburg, South Africa

# ID 388 Proposed Performance Management System for Indonesian Ministry of Health Using Integrated Performance Management System

Indra Wirapraceka and Dermawan Wibisono, ITB, Bandung, Indonesia

#### ID 471 Enhanced Organizational Ambidexterity through the Automation of Production-Related Processes

Eva Bogner, Christopher Kaestle and Joerg Franke, Institute for Factory Automation and Production Systems, Friedrich-Alexander-University Erlangen-Nuremberg, Erlangen, Germany

# ID 654 Awareness, Implementation, Effectiveness and Future Adoption of Operational Improvement Initiatives: Survey Results

Musli Mohammad, Noor Hamizah Yaakub, Mohd Shahir Yahya, and Nor Aziati Abdul Hamid, Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia

#### ID 647 Implementation of Fuzzy Inference System for Production Planning Optimisation

R. Ramlan, A. P. Cheng. S. W. Chan and Y. Ngadiman, Department of Production and Operation Management, Universiti Tun Hussein Onn Malaysia, Malaysia

# ID 370 Identifying Organisational best practices redesign: skills, grading and wage systems for synthesizing findings on WCM

Makhala Mpho Motebele, University of Johannesburg, South Africa

#### 08:00 - 09:15, WEDNESDAY

# Lean and Six Sigma I

Starhill 7

Session Chair: Amjad Khalili, International Islamic University Malaysia

# ID 121 Introducing Radio Frequency Identifation into Lean Manufacturing; An application in garment industry Michael Wahba, Lamia Shihata and Amr Talaat, German University in Cairo, Egypt

# ID 319 Qualtiy Improvement in Plastic Based Toy Manufacturer Using Six Sigma Method

Rahmat Nurcahyo and Dendi Ishak, Universitas Indonesia, Depok, Jawa Barat, Indonesia

### ID 330 An Investigation of Lean Manufacturing Implementation in Textile Sector of Pakistan

Zahid Abbass Shah and Hadia Hussain, University of the Punjab, New Campus, Lahore, Pakistan

### ID 386 Leanness Assessment for Adapting Lean Manufacturing Principles to Textile Processing

Abebayehu Abdela, School of Mechanical and Industrial Engineering, Ethiopia Institute of Technology-Mekelle, Mekelle University, Mekelle, Tigray, Ethiopia

### ID 491 A Critical Assessment of Prevailing Models for Measuring Lean Manufacturing

Amjad Khalili, Md Yusof Ismail, A.N.M.Karim, and Mohd Radzi Che Daud, International Islamic University Malaysia, Kuala Lumpur, Selangor, Darul Ehsan, Malaysia

#### 08:00 - 09:15, WEDNESDAY

# **Supply Chain Management V**

Starhill 8

Session Chair: Muhammad Rusman, Hasanuddin University, Makassar, Indonesia

#### ID 125 Minimizing fluctuation in commodity pricing using Dynamic Simulation

Madhupreetha Venkatesh, Confederation of Indian Industries, Chennai, Tamil Nadu, India

# ID 580 The development of a framework for Australian SMMEs collaboration in a global supply chain environment, Part 1: A conceptual model and solution approach

Mohammad Rizal Firmansyah, University of South Australia, Mawson Lakes, Adelaide, South Australia, Australia

### ID 321 Reverse Logistics in Indian Pharmaceutical Industry

Jamal A Farooquie, Aligarh Muslim University (AMU), Aligarh, UP, India

#### ID 143 Disruption recovery of two-stage serial supply chain with consideration of carbon emission cost

Noraida Azura Darom and Hawa Hishamuddin, Universiti Kebangsaan Malaysia, Bandar Baru Bangi, Selangor, Malaysia

#### ID 246 Optimization Planning for Logistics distribution of rice commodities in South Sulawesi

Muhammad Rusman, Industrial Engineering, Hasanuddin University, Makassar, Sulawesi Selatan, Indonesia

#### 08:00 - 09:30, WEDNESDAY

# Manufacturing and Design

Bintang V

Session Chair: Muhammad Akmal Johar, Universiti Tun Hussein Onn Malaysia

### ID 468 Applying Human Centered Design Process to Hitachi's Integrated Plant Construction System

Eizaburo Takegami, Service Design Research Department, Htachi, Ltd., Research & Development Group, Tokyo, Japan Ryota Niizeki, Service Design Research Department, Htachi, Ltd., Research & Development Group, Tokyo, Japan

Toshihiro Suzuki, Photovoltaic Power System Department, Hitachi, Ltd., Power Systems Company, Ibaraki, Japan Yasuaki Yokosuka, Project Management Supporting Department, Hitachi, Ltd., Power Systems Company, Ibaraki, Japan Kazuto Tatehora, Project Management Department, Hitachi Document Solutions Co., Ltd., Tokyo, Japan Hisako Okada, Project Management Department, Hitachi Document Solutions Co., Ltd., Tokyo, Japan

# ID 327 An Improvement on Shear Test Equipment for HGA and GR&R Analysis in a Magnetic Head Operation

Krisada Asawarungsaengkul and Santi Pumkrachang, Department of Industrial Engineering, King Mongkut's University of Technology, North Bangkok, Thailand

# ID 507 Development of a Business Process Model Notations (BMPN) for a Cloud Manufacturing Architecture

Aziz E. ElSayed, Mootaz Ghazy and Ahmed Laswad, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt

#### ID 550 Application of Fuzzy Logic and Fuzzy Systems in Machining: A Literature Review

Sahil Nanda, Shubham Singhal, Rushil Batra and Ranganath M. Singari, Delhi Technological University, New Delhi, Delhi, India

#### ID 523 Build Up of Copper EDM Electrode by Using Galvanic Plating Process

Hussain Mohammed Yousif, Central Tool Room Plant, Nasser State Company, Ministry of Industry & Mineral, Baghdad, Iraq Hijran Zainalabidin, Dep. of Production Engineering and Metallurgy, University of Technology, Baghdad, Iraq Niveen Jamal Abd Alkader, Dep. of Materials Engineering, University of Technology, Baghdad, Iraq

### ID 395 Comparative Performance Study of Smart Structure for Thermal Microactuators

Muhammad Akmal Johar, Universiti Tun Hussein Onn Malaysia, Parit Raja, Johor, Malaysia

### 08:00 - 09:15, WEDNESDAY

# **Undergraduate Research Presentation**

**Bintang VI** 

Session Chair: Mellak Abderrahmane, Boumerdes University - Algeria, Boumerdes, Algeria

### ID 435 Study on Performance Evaluation of Self-propelled Reaper

Jannatul Ferdows Nipa, Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh

#### ID 087 Evaluating Maintenance Strategies Effectiveness on Overall Equipment Utilization

Charles Mbohwa and Bupe Mwanza, University of Johannesburg, Gauteng, South Africa

# ID 685 Need for Deployment of RFID Technology in Indian Hospitals

Parul Maroo, Industrial Engineering, Pandit Deendayal Petroleum University, Raisan, Gandhinagar, Gujarat, India

### ID 690 Transportation of Organs using UAV

Nivedha Balakrishnan, Kannan Devaraj, Siranjiv Rajan and Giriprabhu Seshadri, Project Student, Sri Ramakrishna Engineering College, Coimbatore, India

#### ID 234 The environmental impact of inputs used in the vitivinicultural sector in Algeria

Kaddour El Heit, Université Mouloud Mammeri, Tizi Ouzou, Algeria

Hamama Anderazak, University Tizi Ouzou, Algeria

Mellak Abderrahmane, Boumerdes University - Algeria, Boumerdes, Algeria

#### 08:00 - 09:30, WEDNESDAY

# Reliability and Maintenance

**Bintang VII** 

Session Chair: Wilkistar Otieno, University of Wisconsin-Milwaukee, United States

# ID 084 Cost Based Failure Consequence Approach for Identifying Critical Components for Maintenance Support Decision

Pravin Tambe, Rcoem, Nagpur, Maharashtra, India

Makarand Kulkarni, IIT Delhi, New Delhi, Delhi, India

#### ID 283 Exergy Based Multi-State Reliability Model for a Stationary Gas Turbine

Tamiru Alemu Lemma, Fakhruldin Mohd Hashim and Mohd Amin Bin Abd Majid, Department of Mechanical Engineering, Universiti Teknologi Petronas, Bandar Sri Iskandar, Perak, Malaysia

# ID 284 Gas Turbine Prognostics using Fuzzy Systems and Modified Bat Algorithm

Tamiru Alemu Lemma, Fakhruldin Mohd Hashim and Mohd Amin Bin Abd Majid, Department of Mechanical Engineering, Universiti Teknologi Petronas, Bandar Sri Iskandar, Perak, Malaysia

### ID 345 Comparative Analysis of Offshore Pipeline Reliability Using Degradation Analysis and PF Interval Models

Ainul Akmar Mokhtar, Universiti Teknologi Petronas, Bandar Seri Iskandar, Perak, Malaysia

#### ID 555 Research on BRT Driver Jakarta Fatigue Evaluation

Ketut Ayu, Nike Septivani and Rida Zuraida, Bina Nusantara University, Jakarta Barat, Indonesia Hardianto Iridiastadi, Institut Teknologi Bandung, Bandung, Jawa Barat, Indonesia

### ID 420 Warranty Optimization for Remanufactured Products

Wilkistar Otieno, University of Wisconsin-Milwaukee, United States

# **08:00 – 09:15, WEDNESDAY**

# **Human Factors and Ergonomics**

Mayang Sari I

Session Chair: Zahid Abbass Shah, University of the Punjab, Lahore, Pakistan

#### ID 381 Anthropometric Data Variation Within Gari-frying Population

Taiwo Samuel, Dept. of Agricultural and Mechanical Engineering, Olabisi Onabanjo University. Nigeria Olateju Aremu, Federal Institute of Industrial Research Oshodi (FIIRO), Lagos, Nigeria Olasunkanmi Ismaila, Federal University of Agriculture, Abeokuta, (FUNAAB), Nigeria Babatunde Adetifa, Dept. of Agricultural and Mechanical Engineering, Olabisi Onabanjo University. Nigeria Livinus Onu, S.E. Adegbite and A.A. Olokose, Federal Institute of Industrial Research Oshodi (FIIRO), Lagos, Nigeria

# ID 412 Association between Psychosocial factors with upper-musculoskeletal disorders: An academic review Paras Behrani, UTP, Tronoh, Perak, Malaysia

# ID 422 Design of Human Cognitive Model in a Self-Optimizing Assembly Cell: A Case Study of Indonesian

Novie Susanto and Kharisma Panca Kurniawati, Industrial Engineering Dept, Faculty of Engineering, Diponegoro University, Semarang, Indonesia

### ID 432 Musculoskeletal Disorders among Caregivers in Nursing Home

Hardianto Iridiastadi and Bayuardi Anggawisnu, Faculty of Industrial Technology, Institut Teknologi Bandung, Bandung, Jawa Barat, Indonesia

Erry Rimawan, Graduate Program, Universitas Mercu Buana, Jakarta, Indonesia

#### ID 467 Ergonomic design of workstation for a labeling task

Zahid Abbass Shah and Asim Amjad, University of the Punjab, New Campus, Lahore, Punjab, Pakistan

### 08:00 - 09:15, WEDNESDAY

# **Decision Analysis**

Mayang Sari II

Session Chair: Somayeh Khoshsoroor, Harbin Institute of Technology, Harbin, Heilongjiang, China

# ID 356 Assessing Customer Requirements and Preferences for a Perishable Product: A Case of an Indian Cooperative Dairy

Anubha Rautela, Vinaytosh Mishra, S. K. Sharma, P. Bhardwaj and Nishith Mohan, Indian Institute of Technology-BHU, Varanasi, Uttar Pradesh, India

### ID 474 Applying fuzzy-AHP and VIKOR method to evaluate the fitness of ERP systems

Li-Man Liao, Ching-Jen Huang and Po-Chih Kang, National Chin-Yi University of Technology (NCUT), Taichung, Taiwan

### ID 624 The Psychology of the Competition in High-Tech Industries

Ehsan Chitsaz, Harbin Institute of Technology, Harbin, Heilongjiang, China Liang Dapeng, School of Economy and Management, Harbin Institute of Technology, Harbin, Heilongjiang, China Somayeh Khoshsoroor, School of Economy and Management, Harbin Institute of Technology, China Hamid Shafizadeh, Texas A&M University College Station, Texas, United States

#### ID 542 Evaluation of Innovative Product Development Practices in an Organization: A Case Study

Vinayak Kalluri, BML Munjal University, Gurgaon, Haryana, India

#### ID 632 How Team Allocate the Resource - A Model of Escalation of Commitment in Competitive Situation

Somayeh Khoshsoroor, Liang Dapeng, Ehsan Chitsaz and Shahid Kalim, School of Economy and Management, Harbin Institute of Technology, Harbin, Heilongjiang, China

# 08:00 - 09:15, WEDNESDAY

# **Engineering Management**

Mayang Sari III

Session Chair: Charles Mbohwa, University of Johannesburg, South Africa

## ID 010 A Cleaner Production (CP) Perspective for the Metal Industry Processes: Case Study

Charles Mbohwa and Ignatio Madanhire, University of Johannesburg, Gauteng, South Africa

#### ID 109 The impact of Process Improvement initiatives in manufacturing industry in South Africa

Mukondeleli Grace Kanakana Katumba, Tshwane University of Technology, South Africa Sydney Theko, Automotive Industry Development Centre, Pretoria, South Africa

### ID 347 Problem-Solving, Decision Making and Managerial Skills of Engineer-Managers in Selected Small-To-Large Scale Enterprises in Laguna

Josephine Villamin, PIIE, and Laguna State Polytechnic University, Sta. Cruz, Laguna, Philippines

#### ID 377 Globalization of Logistics and Supply Chain Management

Majid Baseer and Muhammad Arsalan, Sarhad University of Science and Information Technology, Peshawar, Pakistan

### ID 016 Cleaner Production to Optimize Resource Consumption and Reduce Effluent Waste in a Beverage Plant Charles Mbohwa and Ignatio Madanhire, University of Johannesburg, Gauteng, South Africa

## 08:00 - 09:15, WEDNESDAY

**Energy** 

Mayang Sari IV

Session Chair: Mohammad Mahfujur Rashid, Ahsanullah University of Science and Technology, Dhaka, Bangladesh

### ID 170 Component Rating Optimization Methodology for the Protection of Photovoltaic Solar Power System **Components from Shading Effect**

Ayman El Hakea, American University in Cairo, Alexandria, Egypt Mohamed Amin, Cairo University, Giza, Egypt

## ID 271 Development of an Expert System for the Feasibility Assessment of Renewable Energy Projects

M. Khurshid Khan, Farhan Qutab Siddiqui and Jasim Al-Dairi, University of Bradford, United Kingdom

### Renewable energy policy in Germany and Malaysia: Success factors

Md. Mizanur Rahman, Aminuddin Saat and Mazlan Abdul Wahid, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia

### ID 396 Aerodynamic Optimization of NACA64A410 Blade Aerofoil for Small Wind Turbine Application with Ansys Fluent Mulu Bayray Kahsay, Mekelle University, Mekelle, Tigray, Ethiopia

Tariku Achamyeleh, Department of Mechanical Engineering, Faculty of Technology, Debre Tabor University, Debre Tabor, Ethiopia

Mulu Bayray, School of Mechanical and Industrial Engineering, Ethiopian Institute of Technology- Mekelle, Mekelle University, Mekelle, Ethiopia

### ID 399 Tidal Energy and its Prospects in Bangladesh

Mohammad Mahfujur Rashid, Ahsanullah University of Science and Technology, Dhaka, Bangladesh

9:30 – 10:15 Tuesday Morning Keynote:

Ir. Dr. Zuhairi Abd. Hamid

### Executive Director - Construction Research Institute of Malaysia (CREAM)

Mayang Sari Grand Ballroom

10:15 – 11:00 Tuesday Morning Keynote:

Speaker from PROTON Automobile – Malaysia

11:00 - 11:30 Netorking Break - Exhibition Hall

### 11:30 - 12:45, WEDNESDAY

Global Engineering Education VI

Starhill 4

Session Chair: Dr. Rosemary Seva, De La Salle University (DLSU), Manila, Philippines

11:30 - 11:55 (Wednesday)

Dr. Alfredo Soeiro

Associate Professor

University of Porto, Portugal

Past Academic Director in Civil Engineering

Past Pro-Rector of the University of Porto for Continuing Education

Past President - European Society of Engineering Education

11:55 - 12:20 (Wednesday)

### Dr. Asela K. Kulathunga

Senior Lecturer
Department of Production Engineering
Faculty of Engineering
University of Peradeniya

Sri Lanka

12:20 - 12:45 (Wednesday)

### Dr. Rosemary Seva

Dean of Gokongwei College of Engineering De La Salle University (DLSU)

Manila, Philippines

### 11:30 - 12:45, WEDNESDAY

# Industry Solutions VI

Starhill 5

Session Chair: Farrah "Nix" A. Juban, Intel Corporation, Penang, Malaysia

11:30 - 11:55 (Wednesday)

### Dr. Zain Tahboub

Chief Advisor-Director of Excellence & Innovation Dubai Aviation Engineering Projects (DAEP) United Arab Emirates (UAE)

"I3 University of the future for integrating the university with industry and innovation"

11:55 - 12:20 (Wednesday)

### Md Fauzi Ahmad

Production and Operation Department Universiti Tun Hussein Onn Malaysia (UTHM) Batu Pahat, Johor, Malaysia

ID 692 Critical Success Factors of Six Sigma Implementation in Malaysian Manufacturing Industry

Md Fauzi Ahmad, Wong Jing Ping, Nor Aziati Abdul Hamid and Shiau Wei Chan, Production and Operation Department,

Universiti Tun Hussein Onn Malaysia (UTHM), Batu Pahat, Johor, Malaysia

Josu Takala, Department of Engineering Science and Industrial Management, University of Vaasa, Wolffintie, Finland

12:20 - 12:45 (Wednesday)

## Farrah "Nix" A. Juban

Process Engineering Excellence & Kaizen Service Program Manager for Assembly and Test Manufacturing Intel Corporation
Penang, Malaysia

When Change is Good The Kaizen Way in Intel Vietnam Assembly and Test Factory's (VNAT)

### 11:30 - 12:45, WEDNESDAY

## **Operations Research**

Starhill 6

Session Chair: Nurhadi Siswanto, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

## ID 070 Disambiguation Points Sampling Heuristic for the Stochastic Obstacle Scene Problem

Vural Aksakalli, Istanbul Sehir University, Uskudar, Istanbul, Turkey

Ali Fuat Alkaya and Serkan Yildirim, Marmara University, Goztepe, Istanbul, Turkey

### ID 075 Dual Based Procedure for the Single Stage General Minimum Cost Flow Problem

R.R.K. Sharma and Priyank Sinha, Indian Institute of Technology, Kanpur, UP, India

# ID 375 The Impact of Structure of Interdependence on Supplier Performance in the Local Pineapple Processing Supply Chain in Thailand: a Mixed Method Research

Phatcharee Thongrattana, Sudaratana Wongweragiat and Kritsana Aimdate, Kasetart University, Chatuchak, Bangkok, Thailand

### ID 427 Mathematical Model for Maritime Inventory Routing Problem with Multiple Time Windows

Nurhadi Siswanto, Industrial Engineering Department, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

### 11:30 - 12:45, WEDNESDAY

# Lean and Six Sigma II

Starhill 7

Session Chair: Muhammad Hamad Sajjad, Alfaisal University, Riyadh, Saudi Arabia

### ID 001 A Sequential Truck Transportation Waste Reduction Scheme

Bernardo Villarreal and Andrea Lopez, Universidad de Monterrey, San Pedro Garza Garcia, Nuevo Leon, Mexico

### ID 045 Applying the Principles of Lean Management to the Radiology Department

Demet Bayraktar, Hakan Butuner and Gözde Hatipoğlu, Business Administration Department, Faculty of Business and Management Sciences, Suleyman Sah University, Tuzla, Istanbul Turkey

### ID 090 Design and assessment of lean handling buffers in forward-reserve model

Bhavin Shah and Vivek Khanzode, National Institute of Industrial Engineering, Mumbai, Maharasthra, India

### ID 286 Value Chain Optimization in Overseas Procurement Using Lpp

Deepak Chandra, National Institute of Industrial Engineering, Mumbai, India Aman Sinha, Mahle Behr India Private limited, Pune, Maharashtra, India Rohit Kumar Singh, SAP, Bangalore, Karnataka, India

### ID 063 Six Sigma Implementation

Muhammad Hamad Sajjad, Alfaisal University, Riyadh, Saudi Arabia

### 11:30 - 12:45, WEDNESDAY

# Supply Chain Management VI

Starhill 8

Session Chair: Shao Hung Goh, SIM University, Singapore

### ID 256 Reliability-based Robust Design Optimization of Dynamic Supply Chain Network

Abdulaziz T. Almaktoom, Effat University, Jeddah, Mecca, Saudi Arabia Krishna Krishnan, Wichita State University, Wichita, KS, United States

## ID 265 Inventory Routing Problem for Deteriorating Items with Multi Tours

Gede Agus Widyadana, Petra Christian University, Surabaya, Indonesia Takashi Irohara, Sophia University, Tokyo, Japan Syarif Daniel Budiman, Petra Christian University, Surabaya, Indonesia

### ID 552 Coordinating a Multi-echelon Apparel Supply Chain in the Presence of Supply and Demand Uncertainty

Arnab Adhikari, Operations Management Area, Indian Institute of Management Calcutta, Joka, Kolkata 700104, India Arnab Bisi, Decision Sciences and Information Systems Area, Johns Hopkins Carey Business School, Baltimore, Maryland, USA

### ID 128 Heterogeneous Vehicle Routing Problem in a Supply Chain

Prabhas Bhardwai and Anil Kumar Agrawal, IIT (BHU), Varanasi, Utttar Pradesh, India

# ID 158 A Price Review Framework for Maintenance, Repair and Operations Procurement Contracts in the Public Sector Shao Hung Goh, SIM University, Singapore

## 11:30 - 12:45, WEDNESDAY

# Manufacturing and Design

**Bintang V** 

Session Chair: Rubina Bahar, International Islamic University Malaysia

### ID 521 Investigation on Corrosion Behavior of the Al/SiC Nanocomposites in Sea Water

Niveen Jamal Abdul kader, Materials Engineering, University of Technology, Baghdad, Iraq Hussain Mohammed Yousif, Central Tool Room Plant, Nasser State Company, Ministry of industry & mineral, Baghdad, Iraq Ahmed Ameed Zainalabdeen, Materials Engineering, University of Technology, Baghdad, Iraq

### ID 657 Various Techniques to Design Controllers for Single Link Flexible Arm

Noshin Fatima and Farhan Hanif, Capital University of Science and Technology (CUST), Islamabad, Punjab, Pakistan

### ID 668 Relationship between Human Errors in Maintenance and Overall Equipment Effectiveness in Food Industries

Yunos Ngadiman, Burairah Hussin, Nor Aziati Abd Hamid, Rohaizan Ramlan and Liew Kai Boon, Department of Production and Operation Management, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

### ID 506 Minimum Quantity Lubrication in Micromachining: A Greener Approach

Rubina Bahar, Ahmad Syahmi Arham Bin Zulkifli and Tasnim Firdaus Ariff, International Islamic University Malaysia (IIUM), Kuala Lumpur, Malaysia

**Bintang VI** 

### 11:30 - 12:45, WEDNESDAY

# **High School STEM Project Presentation**

Session Chair: Bhuvenesh Rajamony, UNIMAP, Malaysia

### ID 533 Composition Methodology for Optimal Portfolio and Performance Measures Considering Indian SENSEX

Hohyun Lee, Hyunha Cho and Yuchan Han, Paul Math School, Goesan-gun, Chungcheongbuk-do, Korea

## ID 539 Crime Trend Analysis by Changes of Spatial Autocorrelation and Hot-spot

Hohyun Lee and Dain Kim, Data Science Lab, Paul Math School, Goesan-gun, Chungcheongbuk-do, Korea

### ID 541 Selection of Optimal Portfolio Model by Comparing Mock Stock Trading

Hohyun Lee, Youngjoo Lee, Minsung Kim and Taeheon Kim, Paul Math School, Goesan-gun, Chungcheongbuk-do, Korea

### ID 545 Using Mathematical Programming for Investment Assessment and Optimal Investment

Hohyun Lee, Jinwoo Lee and Myeonghun Ji, Paul Math School, Goesan-gun, Chungcheongbuk-do, Korea

### 11:30 - 1:00, WEDNESDAY

# **Reliability and Maintenance**

**Bintang VII** 

Session Chair: Joe Amadi-Echendu, University of Pretoria, South Africa

### ID 416 Reliability Analysis of a Motor Control Unit Used in Electric Vehicles

Ting-Hao Kan, Hsin-Wei Huang and Wen-Fang Wu, National Taiwan University, Da'an Dist., Taipei City, Taiwan

### ID 425 Availability Allocation Using Systems Engineering Principles

Abraham Almaw Jigar, Cecilia Haskins and Mary Ann Lundteigen, Norwegian University of Science and Technology, Trondheim, Sør-Trøndelag, Norway

# ID 609 An Investigation into Bearing Fault Diagnostics for Condition Based Maintenance Using Band – Pass Filtering and Wavelet Decomposition Analysis of Vibration Signals

Joseph B Wood, Muhammad Ilyas Mazhar and Ian Howard, Curtin University: Department of Mechanical Engineering, Perth, Australia

# ID 371 A Comparative Study of ANFIS and ANNs Models for Performance-Based Condition Monitoring of Industrial Gas Turbines

Mohammadreza Tahan-Bouria, Masdi Muhammad and Z.A. Abdul Karim, Department of Mechanical Engineering, Universiti Teknologi Petronas, Iskandar, Perak Darul Ridzuan, Malaysia

### ID 318 Identifying the root causes contributing to defects in order to minimise scrap

Zanele Mpanza, Transport Systems and Operations, CSIR, Pretoria, South Africa

### ID 592 A bibliometric study on design, application and management of power transformers

Joe Amadi-Echendu and Jacob Mafutsana, University of Pretoria, South Africa

### 11:30 - 1:00. WEDNESDAY

## **Production Planning and Management**

Mayang Sari I

Session Chair: Ali Vatankhah Barenji, Eastern Mediterranean University, Turkey

### ID 068 A Genetic Algorithm for Solving the Integrated Cell Formation, Layout and Scheduling Problem

Sherif Fahmy, American University of the Middle East (AUM), Egaila, Kuwait

### ID 102 An Improved Analogy-based Demand Forecasting Method for Service Parts

Masaru Tezuka, Satoshi Munakata and Shinji lizuka, Hitachi Solutions East Japan, Ltd., Sendai, Miyagi, Japan

# ID 105 Measuring Production Floor Performance Using Systematic Approach - A Case Study of Hospital Beds Production

Susanto Sudiro, Magister Teknik Mesin Universitas Pancasila Jakarta, Jakarta Pusat, Jakarta, Indonesia Sha'ri Mohd Yusof, Razak School of Engineering and Advanced Technology, Kuala Lumpur, Malaysia

# ID 132 An Analysis of competitive Advantages of South African Manufacturing industries. A case study; Automotive Industries

Mukondeleli Grace Kanakana Katumba and John Ikome, Tshwane University of Technology, South Africa

# ID 160 Schedule Nervousness in Production Operations of an Airline Catering Company: The Challenge of an Effective Demand Response Program

Narat Hasachoo and Ruedee Masuchun, Faulty of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand

# ID 302 A Dynamic Multi Agent based scheduling for flexible flow line manufacturing system: UPVC door and window Company

Ali Vatankhah Barenji and Danial Roudi, Eastern Mediterranean University, Famagusta, Rize, Turkey Majid Hashemipour, School of Engineering Mathematics and Science, Robert Morris University, Moon Morris, United States Reza Vatankhah Barenji, Hacettepe University, Ankara, Baytape, Turkey

### 11:30 - 1:00, WEDNESDAY

### e-Business and e-Commerce

Mayang Sari II

Session Chair: Eui H. Park, North Carolina Agricultural & Technical State University, Greensboro, USA

#### ID 028 Influence of culture on E-commerce and vice versa

Teklehaimanot Tadele Kidane and RRK Sharma, Indian Institute of Technology, Kanpur, Uttar Pradish, India

### ID 052 Factors Affecting Consumers' purchasing Decision through E-Commerce

Teklehaimanot Tadele Kidane and RRK Sharma, Indian Institute of Technology, Kanpur, Uttar Pradish, India

### ID 168 Understanding the Impulsiveness Effect of a Web Design on Online Fashion Stores

Paulina Ariningsih, Marihot Nainggolan, Ignatius Sandy and Dhea Widiastri, Universitas Katolik Parahyangan, Bandung, West Java, Indonesia

## ID 344 Evaluating the Location of Effective Product Advertising on Facebook Ads

Atya Aisha, Aulia Hadining and Dimas Aji, Telkom University, Bandung, West Java, Indonesia

### ID 655 Sniping as a Rational Strategy on Ebay

Faroog Sheikh, State University of New York (SUNY), Geneseo, NY, United States

### ID 676 Understanding Risk Perception Related to Trust and Bias in Cyberspace

Emeka P. Idoye and Eui H. Park, Department of Industrial & Systems Engineering, North Carolina Agricultural & Technical State University, Greensboro, USA

### 11:30 - 1:00, WEDNESDAY

# **Facility Planning and Management**

**Mayang Sari III** 

Session Chair: Suman Samanta, IIT Kanpur, Kanpur, India

### ID 270 Scheduling of Three FMS Layouts Using Four Scheduling Rules

M. Khurshid Khan, Muhammad Arshad and Milana Milana, University of Bradford, West Yorkshire, United Kingdom

## ID 032 Modified Cluster Boundary Search Technique for Improved Layout Designs

Mohammed Al-Saleh, Umm Al-Qura University, Makkah, Saudi Arabia Mustahsan Mir, Ajman University of Science & Technology, UAE Ahmed Hassanin, RWTH Aachen, Germany

### ID 115 Reliable capacitated facility location problem: SAA based approach

Sumanta Basu, Megha Sharma and Partha Sarathi Ghosh, Indian Institute of Management Calcutta, Kolkata, West Bengal, India

### ID 340 Risk issues in facility layout design

Saber Darmoul, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia Sonia Hajri-Gabouj and Sana Kouki Amri, INSAT, Tunis, Tunisia Henri Pierreval, Ifma, Clermont-Ferrand, France

### ID 547 Multi-server Congested Location Allocation Problem with Multiple Objectives

Mehdi Seifbarghy and Mehrnaz Asgari, Department of Industrial Engineering, Alzahra University, Tehran, Iran

### ID 333 A Modified ABC Algorithm with Genetic and Neighborhood Search for solving QAP

Suman Samanta and Deepu Philip, IIT Kanpur, Kanpur, Uttar Pradesh, India

## 11:30 - 12:45, WEDNESDAY

## **Energy**

**Mayang Sari IV** 

Session Chair: Dr. Mehran Doulat. University of Wollongong, Wollongong, NSW, Australia

## ID 423 Conversion of Waste Plastics into Gasoline and Diesel

Salma A. Iqbal, Raihan Ahamed, Md. Mizanul Haque Mizan, and Mohammad Ezharul Foyez, Shahjalal Univerisity of Science and Technology, Sylhet, Bangladesh

# ID 379 Enhancement of tube and tube Heat exchanger with semispherical hollow baffle for counter flow Rajendra Patil, TSSMS PVPIT Bavdhan Pune, Pune, Maharashtra, India

# ID 646 Photosynthetic bioenergy utilizing CO2 from plant flue gas: an approach on microalgae based third generation biofuels production

Shamsuddin Ahmed, Department of Mechanical and Chemical Engineering, Islamic University of Technology (IUT), Dhaka, Bangladesh

M. Abdul Quader, Department of Mechanical Engineering, Faculty of Engineering, University of Malaya, Kuala Lumpur, Malaysia

### ID 497 Performance Analysis of Different Controller for PEMFC Fed Adjustable Speed Drives

Hemachandran K, Dr.MGR Educational & Research Institute University, Chennai, Tamilnadu, India Justus Rabi B, Shri Andal Alagar College of Engineering, Chennai, Tamilnadu, India Darly S.S., University College of Engineering and Technology, Thindivanam, Tamilnadu, India

ID 430 Application of Decoupled Harmonic Power Flow for Assessment of Harmonic Passive Filter Size and Location Agus Ulinuha, Universitas Muhammadiyah Surakarta, Indonesia

## 1:00 pm Wednesdy Lunch Keynote:

Dr. Rupy Sawhney, Heath Fellow in Business and Engineering Professor, Industrial and Systems Engineering University of Tennessee, Knoxville, USA Mayang Sari Grand Ballroom

### 2:00 pm Networking Break – Exhibition Hall

# 2:30 – 3:45, WEDNESDAY Global Engineering Education VII

Starhill 4

Session Chair: Dr. Eldon Caldwell, University of Costa Rica

2:30 - 3:00 (Wednesday)

### Dr. Md. Mizanur Rahman

Senior Lecturer
Department of Thermo Fluids
Faculty of Mechanical Engineering
University Technology Malaysia (UTM)
Skudai, Johor Bahru, Malaysia

Engineering education in energy technology: paradigm shift from technology-centred to multidisciplinary focused

3:00 - 3:30 (Wednesday)

**Dr. Pal Pandi Ammavasi**, M.E., Ph.D (Engg), MBA., Ph.D (Mgmt) Pal PandiAssociate Professor Bharath Niketan Engineering College

Aundipatty, Tamilnadu, India

3:30 - 4:00 (Wednesday)

Dr. Eldon Caldwell

Director, Industrial Engineering Department Engineering School University of Costa Rica

Using Robotics as Educational Framework Strategy in Industrial Engineering

### 2:30 - 3:45, WEDNESDAY

# Industry Solutions VII

Starhill 5

Session Chair: Ms. Resh Plaha, Crystal Quality, UK

# Panel Session on "Women in Industry and Academia"

# **Penalists**

Ms. Resh Plaha - CHAIR  BSc (Hons), IoD, IRCA, ACQI  Crystal Quality UK Ltd	Dr. Chan Chee-Ming Associate Professor and Deputy Dean (Academic and Research) Centre for Graduate Studies Universiti Tun Hussein Onn Malaysia Batu Pahat, Johor, Malaysia
Dr. Mei Fong Chong Professor, Faculty of Engineering The University of Nottingham Malaysia Campus Selangor Darul Ehsan, Malaysia	Prof. Christine Ennew Christine Ennew 1Provost, University of Nottingham Malaysia Campus Pro Vice Chancellor and Professor of Marketing University of Nottingham Malaysia Campus Selangor DE Malaysia
Dr. Ilham Kissani Assistant Professor of Engineering & Management Science School of Science & Engineering Al Akhawayn University Ifrane, Morocco	Dr. Stefanie Pillai STEFANIE PILLAIDean and Associate Professor Faculty of Languages & Linguistics University of Malaya Kuala Lumpur, Malaysia

#### 2:30 - 3:45, WEDNESDAY

# **Operations Research**

Starhill 6

Session Chair: Arnab Adhikari, Indian Institute of Management Calcutta, India

# ID 197 An empirical study of competitiveness measurement methododology: A case study of the automotive manufacturing sector

Laseinde Opeyeolu Timothy and Mukondeleli Grace Kanakana Katumba, Tshwane University of Technology, Pretoria, South Africa

### ID 131 Performance Evaluation of an Exact Method for the Obstacle Neutralization Problem

Vural Aksakalli, Istanbul Sehir University, Uskudar, Istanbul, Turkey Ali Fuat Alkaya, Dindar Oz and Ramazan Algin, Marmara University, Istanbul, Turkey Elvan Ceyhan, Koc University, Istanbul, Turkey

### ID 532 Capacitated Lot-Sizing and Scheduling with Sequence-Dependent setups in Petrochemical Plants

Sari Abdullah, Abdulrahim Shamayleh and Malick Ndiaye, Industrial Engineering Department, American University of Sharjah Sharjah, UAE

## ID 630 Investigation of Trade Credit Patterns in Effect with Bank Loan Availability

Jaleel Ahmed and Hui Xiaofeng, Harbin Institute of Technology, Harbin, Heilongjiang, China

## ID 549 An Efficiency and Consistency Based Approach for Selecting the Best Cricket Team

Arnab Adhikari, Adrija Majumdar and Gaurav Gupta, Indian Institute of Management Calcutta, Kolkata, West Bengal, India

### 2:30 - 3:45, WEDNESDAY

## Lean and Six Sigma III

Starhill 7

Session Chair: Bernardo Villarreal, Universidad de Monterrey, San Pedro Garza Garcia, Nuevo Leon, Mexico

### ID 097 Road Map for the Implementation of Lean production tools in SMEs

Amine Belhadi, Fatima Ezzahra Touriki and Said El Fezazi, Caddi Ayad University, High School of Technology Safi, Morocco

### **ID 139 Proposed Lean Sustained Factors**

Sha'ri Mohd Yusof, Razak School of Engineering and Advanced Technology, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia

Katsuki Aoki, Graduate School of Business Administration, Meiji University, Surugadai Campus, Tokyo, Japan

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# ID 195 Application of Lean Manufacturing Concepts to Reduce Manufacturing Lead Times within the Meatball Production Process

Jiratthavee Wejwitwarakul and Rungchat Chompu-inwai, Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Muang, Chiang Mai, Thailand

### ID 460 Effects of Value Stream Mapping in a Processing Industry

Shakil Shaikh, Muhammad Aqib, Hasnain Riaz, Umer Abdullah, Azmat Abbas and Usama Akbar, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan

### ID 022 Hybrid Schemes for Eliminating Road Transportation Waste

Bernardo Villarreal, Universidad de Monterrey, San Pedro Garza Garcia, Nuevo Leon, Mexico

# 2:30 – 3:45, WEDNESDAY Supply Chain Management VII

Starhill 8

Session Chair: Elisa Kusrini, Universitas Islam Indonesia

### ID 025 Relating Supply Chain Risks to Supply Chain Strategy

Teklehaimanot Tadele Kidane and RRK Sharma, Indian Institute of Technology, Kanpur, Uttar Pradish, India

### ID 413 Application System for Smart Supply Chain Management (SCM): Case Study of SMEs in Indonesia

Grisna Anggadwita, School of Economic and Business, Telkom University, Bandung, Indonesia Cut Irna Setiawati, School of Communication and Business, Telkom University, Bandung, Indonesia Yuhana Astuti, School of Economic and Business, Telkom University, Bandung, Indonesia Dini Turipanam Alamanda, School of Economic and Business, Telkom University, Bandung, Indonesia

### ID 626 Valued Supply Chain: The imminent Frontier for Improved Hospital Management

Abu Raihan Bhuiyan Albarune, Nazma Farhat and Farzana Afzal, AlMST University, Kedah, Malaysia

# ID 648 Causal Linkage-based Strategic Map Design along the Robotics and Automation Supply Chain in Thailand

Kanda Boonsothonsatit, King Mongkut's University of Technology Thonburi, Thungkru, Bangkok, Thailand

### ID 066 Using Multiple Criteria Approach to Evaluate Risks associated with Supply Chain Sustainability

Anirban Ganguly, O. P. Jindal Global University, Sonipat, Haryana, India Debdeep Chatterjee, Schneider Electric, Bengaluru, Karnataka, India

# ID 616 Designing performance measurement procedure for supply chain actors and regulator base on a modified model of balanced scorecard and Data Envelopment Analysis

Elisa Kusrini, Universitas Islam Indonesia, Sleman, Yogyakarta, Indonesia

## 2:30 - 3:45, WEDNESDAY

### **Autmation and Control**

**Bintang V** 

Session Chair: Mohammed Bakkari, Faculty of Sciences and Technology of Fez, Fès, Morocco

# ID 312 An investigation into the impact of advance manufacturing technologies implementation in SMEs manufacturing plastic packaging products- A case study of Pakistan

Tanweer Hussain, Shakil Shaikh, Muhammad Jumani, Jamil Khaliqdina and Intizar Ali, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan

## ID 360 An Intelligent feature based process planning for Rotational parts

Vijayakumar Manupati, Harshita Raj and Manidhar Darisi Venkata, Vit University, Vellore, Tamilnadu, India

## ID 684 Strengthening Life Line

Parul Maroo, Komal Koya and Hiren Patel, Department of Industrial Engineering, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, India

### ID 584 Design of control system for Electric Power Steering in vehicle

Mohammad Reza Ahadiat, Department of Electrical Engineering, Mehriz Branch, Islamic Azad University, Yazd, Iran

#### 2:30 - 3:45, WEDNESDAY

# **Engineering Education**

**Bintang VI** 

Session Chair: Karl Hain, Technische Hochschule Deggendorf, Bavaria, Germany

### ID 017 Learning strategies of post-secondary students

Peter Toth, Obuda University, Budapest, Hungary, Hungary

# ID 030 An Effective Organizational Structure to Implement Strategic Plans in Higher Education Institutions Salih Duffuaa and Ahmed Elamin Haroun, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia

### ID 200 Application of Concurrent Engineering for Collaborative Learning and New Product Design

Muhammad Haris Aziz, Summyia Qamar, Aisha Tayyab and Ahmad Wasim, University of Engineering and Technology, Taxila, Pakistan

Chanchal Saha, Binghamton University, Poughkeepsie, NewYork, United States Salman Hussain, University of Engineering and Technology, Taxila, Pakistan

### ID 353 Effect of Heating on the Impedance of NiPc based Organic Field Effect Transistor

Noshin Fatima, Capital University of Science and Technology (CUST), Islamabad, Punjab, Pakistan Khasan Karimov, GIKI, Topi, swabi, Pakistan

M. Mansoor Ahmed, Capital University of Science and Technology (CUST), Islamabad, Punjab, Pakistan

### ID 398 Fostering creativity and innovation in engineering design education: A case study

Karl Hain and Christoph Rappl, Technische Hochschule Deggendorf, Bavaria, Germany

### 2:30 - 3:45, WEDNESDAY

## **Healthcare Systems**

**Bintang VII** 

Session Chair: Vivek Sundar Magesh, TVS Logistics, Chennai, India

### ID 328 Case Averaging as a Tool for Operational Efficiency in GI Endoscopy

Javad Taheri, North Carolina State University, Cary, NC, United States

### ID 076 Capacity Planning For Diabetes Management -Indian Example

Vinaytosh Mishra, Cherian Samuel and S K Sharma, Indian Institute of Technology -BHU, Varanasi, Uttar Pradesh, India

# ID 424 Hospital-Supplier Integration: an Assessment of the Driving Factors in the Context of the Saudi Arabian Healthcare System

Al Shaharni, S., Rahman, S., and Chan, C., RMIT, Melbourne, Vic, Australia

## ID 464 An Integrated Framework for Optimization of Resources in Emergency Departments

Julia El-Zoghby, Hala Farouk and Khaled El-Kilany, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt

### ID 172 Improving Indian Healthcare using Data Mining

Vivek Sundar Magesh, Beri Pradeep, Harinivas Bhaskaran, Sadhanand Lakshminarayanamurthy, Thomas Franco and Nishant Kumar, TVS Logistics, Chennai, Tamil Nadu, India

### 2:30 - 3:45, WEDNESDAY

# **Production Planning and Management**

Mayang Sari I

Session Chair: Linda Kauškale, Institute of the Civil Engineering and Real Estate Economics, Riga Technical University, Latvia

# ID 450 Hidden Wastes in Overall Equipment Effectiveness (OEE) under the study of Maynard's Operation Sequence Technique (MOST)

Puvanasvaran A. Perumal, Faculty of Manufacturing Engineering, Universiti Teknikal Malaysia Melaka, Melaka, Malaysia Teoh Yong Siang, Faculty of Manufacturing Engineering, Universiti Teknikal Malaysia Melaka, Melaka, Malaysia Teruaki Ito, Faculty and School of Engineering, The University of Tokushima, Minami, Jousanjima Nur Syafilla binti Mahamud, Faculty of Manufacturing Engineering, Universiti Teknikal Malaysia Melaka, Melaka, Malaysia

# ID 466 Semiconductor Fabrication Strategy for Cycle Time and Capacity Optimization: Past and Present

Kader Ibrahim, Chik MA and U. Hashim, Institute of Nanoelectronic Engineering, Universiti Malaysia Perlis, Perlis, Malaysia

# **ID 483** Optimal Production-Inventory Control Policy for Manufacturing Systems Subject to Quality Deterioration Karem Dhouib, Department of Mechanical and Industrial Engineering, Faculty of Engineering, Riyadh, Saudi Arabia

# ID 544 Design Simulation and Information Dashboard for Manufacturing Control Using Systematic Approach: a Case Study of Hospital Beds Production

Susanto Sudiro, Magister Teknik Mesin Universitas Pancasila Jakarta, Jakarta Pusat, Jakarta, Indonesia Sha'ri Mohd Yusof, UTM, Jalan Sultan Yahya Petra Kuala Lumpur, Kuala Lumpur, Malaysia Revino Revino, Post Graduate Program, Institut Sains dan Teknologi Nasional Jakarta, Jakarta Selatan, Jakarta, Indonesia

### ID 615 The Effect of Perceived Self-Efficacy and Product Comparisons on Outcome Expectancy of Portable Multi-Screens

Shahid Kalim Khan, Li Guoxin and Ehsan Chitsaz, School of Management, Harbin Institute of Technology, Harbin, China Naqash Ali and Ume Ammara, Department of Management Sciences, CIIT, Pakistan

ID 309 The Strategic Management Analysis of Wood Manufacturing Companies in Latvia - Interdisciplinary Approach Linda Kauškale, Kristīne Fedotova and Sanda Geipele, Faculty of Engineering Economics and Management, Institute of the Civil Engineering and Real Estate Economics, Riga Technical University, Riga, Latvia

### 2:30 - 3:45, WEDNESDAY

## Information Technology

**Mayang Sari II** 

Session Chair: Kannan Devaraj, Sri Ramakrishna Engineering College, Coimbatore, Tamilnadu, India

### ID 023 Business Intelligence and Analytics: Paving way for Operational Excellence in Indian Banks

Anil Kumar Saini, University School of Management Studies, New Delhi, India

Rekha Mishra, University School of Management Studies, Guru Gobind Singh Indraprastha University (GGSIPU), New Delhi, India

# ID 096 Implementation of Mobile Event Monitoring Agents for Manufacturing Execution and Intelligence Systems Using a Domain Specific Language

Christoph Wunck, Jade University of Applied Sciences, Wilhelmshaven, Germany

## ID 193 Developing Manufacturing Execution Software as A Service for Small and Medium Size Enterprise

Ali Vatankhah Barenji and Adedotun Olanrewaju Adetunla, Eastern Mediterranean University, Famagusta, Mersin, Turkey Reza Vatankhah Barenji, Hacettepe University, Ankara, Baytape, Turkey

### ID 342 Intelligent Risk Prediction Method for Risk Management Planning

Suwilai Areejit, Bangkok Thonburi University, Taweewatana, Bangkok, Thailand

# ID 644 Efficient Authentication Method Using Score Level Fusion and Particle Swarm Optimization (Pso) Of Multimodal Biometrics

Kannan Devaraj, Sri Ramakrishna Engineering College, Coimbatore, Tamilnadu, India

### 2:30 - 3:45, WEDNESDAY

# Financial Engineering

**Mayang Sari III** 

Session Chair: Javad Soroor, Shiraz University, Iran

### ID 352 An Innovative Holistic Approach to Optimal Portfolio Management

Waleed Almonayirie, Alpha Data, Abu Dhabi, United Arab Emirates Galia Novak, Sofia University, Sofia, Bulgaria

# ID 385 Use of Smokeless Tobacco by Low Socio-economic Populations and Risk Factors Associated with it Md Shahjahan, Daffodil International University, Dhaka, Bangladesh

# ID 531 Composition Methodology for Optimal Portfolio and Performance Measures Considering Indian SENSEX Hohyun Lee, Hyunha Cho and Yuchan Han, Data Science Lab, Paul Math School, Goesan-gun, Chungcheongbuk-do, Korea

### ID 540 Selection of Optimal Portfolio Model by Comparing Mock Stock Trading

Hohyun Lee, Youngjoo Lee, Minsung Kim and Taeheon Kim, Data Science Lab, Paul Math School, Goesan-gun, Chungcheongbuk-do, Korea

# ID 613 Autonomic Learning Algorithm to Predict Stock Price at the Exchange via Metaheuristics-Based Optimization Javad Soroor and Sahar Khaleghi, Shiraz University, Shiraz, Fars, Iran

## 2:30 - 3:45, WEDNESDAY

# **Sustainability and Green Systems**

**Mayang Sari IV** 

Session Chair: Asela Kulatunga, University of Peradneniya, Sri Lanka

# ID 064 Income inequality and human capital as factors influencing economic development of region – case study of Latvia

Liga Kamola, Uldis Kamols and Svetlana Ivanova, Riga Technical University, Riga, Latvia

# **ID 095** Increasing the competitiveness of the city with energy efficiency measures – possibilities for Latvian cities Liga Kamola, Uldis Kamols, Svetlana Ivanovaand Tatjana Survilo, Riga Technical University, Riga, Latvia

# ID 179 Relationships of Lean, Green Manufacturing and Sustainable Performance: Assessing the Applicability of the Proposed Model

Amjad Khalili, Md Yusof Ismail, A.N.M.Karim, and Mohd Radzi Che Daud, International Islamic University Malaysia, Kuala Lumpur, Selangor, Darul Ehsan, Malaysia

### ID 439 Developing for Sustainable Lanna Cultural Tourism Area

Gulputt Dechvichankit, Vorapoch Angkasith and Dhiranantha Rithmanee, King Mongkut's University of Technology Thonburi, Ratburana, Bangkok, Thailand

### ID 117 Design and Development of Green Label Point Rating System to Promote SCP Concepts

Asela Kulatunga, Faculty of Engineering, University of Peradneniya, Peradeniya, Central, Sri Lanka Gowrynathan Jeyanthinathasarma, Faculty of Engineering, University of Peradeniya, Vavuniya, Northern, Sri Lanka

15:45 - Break

## 4:00 - 5:15, WEDNESDAY

# **Global Engineering Education VIII**

Starhill 4

Session Chair: Dr. Abu Masud, Wichita State University, Kansas, USA

### **PANEL SESSION**

#### **Panelists**

### Dr. Abu Masud, P.E.

Boeing Global Engineering Professor Professor of Industrial and Manufacturing Engineering Wichita State University, Kansas, USA

### Dr. Hans-Juergen Hoyer

Secretary General of the International Federation for Engineering Education Societies (IFEES) Executive Secretary of the Global Engineering Deans Council (GEDC) Resident Scholar in Global Engineering at Marquette University

### Dr. Funso Falade

Department of Civil & Environmental Engineering University of Lagos, Akoka, Lagos, Nigeria President, African Engineering Education Association

### **Hulas King**

Director, Diversity, Professional Affiliations & Global Community Relations Siemens PLM Software St. Louis, Missouri, USA

### 4:00 - 5:15, WEDNESDAY

# Industry Solutions VIII

Starhill 5

Women in Industry and Academia

Session Chair: Dr. Stefanie Pillai, University of Malaya

4:00 - 4:25 pm (Wednesday)

## Ms. Priyadarshani Premarathne

Department of Sociology, Faculty of Arts, University of Peradeniya, Sri Lanka

### ID 241: Perception of female employees towards the Lean and work culture change in apparel industry in Sri Lanka

S. Sewwandi and H.D.P. Premarathne, Department of Sociology, Faculty of Arts, University of Peradeniya, Sri Lanka I. Morawaka and A.K. Kulatunga, Dept. of Production Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka

4:25 - 4:50 pm (Wednesday)

### Mahmmad Mahbub Alam Talikder

Accident Research Institute (ARI)

Bangladesh University of Engineering and Technology (BUET)

Dhaka, Bangladesh

ID 610 Burn Accident related Injuries and Disabilities among the RMG Women Workers: A Case Study of Tazreen Garments Trazedy 4:50 - 5:15 pm (Wednesday)

#### Dr. Stefanie Pillai

Dean and Associate Professor - Faculty of Languages & Linguistics

University of Malaya

Kuala Lumpur, Malaysia

### 4:00 - 5:15, WEDNESDAY

# **Operations Research**

Starhill 6

Session Chair: Amber Shafiq, KAIST, Deajon, Chaladong, Korea

ID 355 Simulation of Extended Resource Constrained Scheduling Problem with a Soft Computed Priority Heuristic Taiba Zahid, Michael Volker and Thorsten Schmidt, Technische universität Dresden, Deutschland, Germany

#### ID 438 An Artificial Bee Colony Algorithm for the Vehicle Routing Problem with Backhauls and Time Windows

Krisada Asawarungsaengkul and Naritsak Tuntitippawan, Department of Industrial Engineering, King Mongkut's University of Technology, Bangkok, Thailand

# ID 529 Optimal promotional policy for a new product in presence of firm's goodwill in Segmented Market: A control theoretic Approach

Prabhneet Kaur Sethi and Prabhneet Kaur Sethi, Department of Applied Mathematics, Amity University, Sector-125, Noida, Uttar Pradesh. India

### ID 589 The Delphi technique: A credible research methodology

Charles Mbohwa, Jan Harm Christiaan Pretorius, Edoghogho Ogbeifun and John Agwa-Ejon, University of Johannesburg,, Gauteng, South Africa

### ID 513 Model of Violator Detector Network Problem - A Case Study Sioux Falls Network

Amber Shafig, KAIST, Deajon, Chaladong, Korea

### 4:00 - 5:15, WEDNESDAY

# **Lean and Six Sigma IV**

Starhill 7

Session Chair: Yunos Ngadiman, Universiti Tun Hussein Onn Malaysia

ID 245 The Development of 5s-Kaizen and Service Excellence Measurement Framework for Malaysia Private Hospitals Nor Aziati Abdul Hamid, Yunos Ngadiman and Nor Hazana Abdullah, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

# ID 262 Application of the Six-Sigma Concept to Time Reduction for Resin Recirculate Rinse in Demineralized Water Production

Thidarat Thanyarak and Parames Chutima, Chulalongkorn University, Bangkok, Thailand

# ID 275 Productivity Improvement of Cutting, Sewing and Finishing Sections through Value Stream Mapping - A Case Study

Abdullahil Azeem and Md. Moin Uddin, Department of Industrial and Production Engineering, Bangladesh University of Engineering and Technology, Dhaka-1000, Bangladesh

## ID 564 Creating shared value: How to guide for the Royal Project area

Napassawan Tangamporn, Vorapoch Angkasith and Dhiranantha Rithmanee, KMUTT, Thung Khru, Bangkok, Thailand

### ID 417 Critical Success Factors of Implementing Green Lean Six Sigma

Cherrafi Anass, Said El Fezazi, Khalid Benhida, Ahmed Mokhlis and Fatima Zohra Elamrani, Cadi Ayyad University, Safi, Morocco

### 4:00 - 5:30, WEDNESDAY

# **Supply Chain Management VIII**

Starhill 8

Session Chair: Rene Amaya, Universidad del Norte, Barranquilla, Atlántico, Colombia

# **ID 591** A Framework for evaluating the performance of Thai Tourism Industry Supply Chain Management Daraka Palang and Korrakot Yaibuathet Tippayawong, Chiang Mai University, Thailand

### ID 585 Two-level Supply Chain with Extended Warranty in Competitive Market Environment

Imam Baihaqi, Bagus Noval and Nani Kurniati, Department of Industrial Engineering, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia

#### ID 621 Supply chain management in Service Quality

Mahadi Hasan Miraz, Ferdoush Saleheen and Mashiour Rahman, University Utara Malaysia, Sintok, Kedah, Malaysia

# ID 582 Intermediary agent in the holistic collaborative production distribution network model for SMMEs Mohammad Rizal Firmansyah, University of South Australia, Mawson Lakes, Adelaide, South Australia, Australia

# ID 021 Relating E-integrated, Triple-A Supply Chain to Environmental Uncertainty, Market Competition and Firm Performance

Tesfaye Tolu Feyissa, Indian Institute of Technology, Kanpur, Uttar Pradesh, India R.R.K. Sharma, Indian Institute of Technology, Kanpur, UP, India

### ID 556 Quick methodology based in the SCOR model for supply chains reengineering of international trade

Rene Amaya and Carlos Otero, Universidad del Norte, Barranquilla, Atlántico, Colombia

### 4:00 - 5:15, WEDNESDAY

## **Entreprenuership and Innovation**

**Bintang V** 

Session Chair: Santiago-Omar Caballero-Morales, Universidad Popular Autonoma del Estado de Puebla, Puebla, Mexico

### ID 233 Development of Training Model of Marketing for SMEs

Yati Rohayati, Telkom University & Telkom Foundation, Bandung, Jawa Barat, Indonesia Sari Wulandari, Telkom University, Bandung, Jawa Barat, Indonesia

# ID 258 Analyzing the Adoption of Malaysian Standards (MS) on SME Performances: The Mediating Effects of Innovation Adoption Factors

Fadhlur Rahim Azmi and Haslinda Musa, Universiti Teknikal Malaysia Melaka, Durian Tunggal, Melaka, Malaysia

ID 475 New Service Development Process in Micro, Small and Medium Enterprises (MSMEs): An Indonesian Case Study Ima Nurul Rachmania, Merlyn Rakhmaniar and Santi Setyaningsih, School of Business and Management, Institut Teknologi Bandung, Bandung, West Java, Indonesia

### ID 570 The Implementation of Team development Process in Cooperative Enterprises

Sebonkile Cynthia Thaba and Charles Mbohwa, Department of Quality and Operations Management, University of Johannesburg, Bunting Road Campus, Johannesburg, South Africa

# ID 573 On the Situation of Traditional Textile Producers in Mexico: General Overview for Supply Chain Improvements Santiago-Omar Caballero-Morales and Gladys Bonilla Enriquez, Universidad Popular Autonoma del Estado de Puebla, Puebla, Mexico

### 4:00 - 5:15, WEDNESDAY

# **Engineering Education**

Bintang VI

Session Chair: Hamid Parsaei, Texas A&M University at Qatar, Doha, Qatar

# ID 494 Assessing Self-Responsibility in Employability Competencies Development among Australian Engineering Students: Introductory report

Daudi Lazarus, University of South Australia, Paralowie, SA, Australia Timothy Ferris, Cranfield University, Shrivenham, Oxfordshire, United Kingdom

## ID 593 The Challenges of Computational Thinking at Higher Secondary School in Mauritius

Canayah Cuniah, University of Technology, Port Louis, Moka, Mauritius

## ID 519 Students Attendance System in Faculty of Engineering at King Abdulaziz University

Sundus Balkhair, Khawlah Alharbi, Hanan Abdullah and Batool Bajkhaif, King Abdulaziz University Jeddah Mecca Saudi Arabia

### ID 694: Android Maze Game for Children as an Autism Therapy

Muhammad Israr Fathoni, Alhamidi Haidar, Muhammad Pu and Zurina Muda, Faculty Information Science and Technology Universiti Kebangsaan Malaysia

### ID 458 EmployingTechnology to Customize the Flipped Classroom Practice

Hamid Parsaei and Mohamed Ismail, Texas A&M University at Qatar, Doha, Qatar

### 4:00 - 5:15, WEDNESDAY

# **Healthcare Systems**

Bintang VII

Session Chair: Michael Mutingi, University of Botswana

### ID 504 Performance Management Criteria in Malaysian Healthcare

Ihfasuziella Ibrahim, Mohd Khairolden Ghani, and Zuhairi Abd Hamid, Construction Research Institute of Malaysia (CREAM), Kuala Lumpur, Malaysia

Syahrul Nizam Kamaruzzaman and Zairul Nisham Musa, University of Malaya, Kuala Lumpur, Malaysia

### ID 553 An Integrated Model for Chemotherapy Planning

Amr Eltawil, Egypt-Japan Univeristy for Science and Technology, New Borg El Arab, Alexandria, Egypt Mahmoud Heshmat, E-JUST, Borgelarab, Alexandria, Egypt

# ID 565 RTOG Criteria to Evaluate Acute Skin Reaction and its Risk Factors in Patients with Head and Neck Cancer Submitted to IMRT Radiotherapy

Khaldoon M. Radaideha and Laila M. Matalqahb, Department of Radiologic Technology, College of Medical Science Al- Qassim University, Saudi Arabia

### ID 689 Need for Deployment of RFID Technology in Indian Hospitals

Parul Maroo, Industrial Engineering, Pandit Deendayal Petroleum University, Raisan, Gandhinagar, Gujarat, India

### ID 597 Fuzzy Multi-Criteria Simulated Evolution for Nurse Re-rostering

Michael Mutingi, University of Botswana, Gaborone, Botswana

### 4:00 - 5:30, WEDNESDAY

## **Production Planning and Control**

Mayang Sari I

Session Chair: Seyed Amirhossein Alavifar, Russian State university of Tourism and Services, Moscow, Russia

### ID 618 Productivity Assessment Based on Different Perspectives in Industries: A Review

Chan Sin Tan, Rosmaini Ahmad, Mohd Fidzwan B. Md. Amin Hamzas and M.I. Hussain, Universiti Malaysia Perlis, Arau, Perlis, Malaysia

# ID 620 A Taguchi-Continues Simulation Approach to the Injection Molding Blowing Process Quality Improvement

Safwan A. Altarazi, Gazal Al Sudani, Zaid Rajab, Zina Q. Karadsheh and Anita Bursheh, German Jordanian University, Amman, Jordan

## ID 647 Implementation of Fuzzy Inference System with Tsukamoto for Production Planning Optimisation

Rohaizan Ramlan, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

# ID 522 A case study of production scheduling and shop floor control for hybrid flexible flowshop

Li-Man Liao, Ching-Jen Huang and Guan-Heng Lin, National Chin-Yi University of Technology, Taichung, Taiwan

# ID 031 Statistical Process Control (SPC) Application in a Manufacturing Firm to Improve Cost Effectiveness: Case study Charles Mbohwa and Ignatio Madanhire, University of Johannesburg, Gauteng, South Africa

### Onlines Wildow and Ignatio Madanine, Onliversity of Johnanines Burg, Gattering, Country in Carlot State of the Country of Country of

# ID 082 Developing a Risk Based Maintenance - A Case study - Low Density Polyethylene (LDPE) production unit of Amir Kabir Petrochemical complex in Iran

SeyedAmirhossein Alavifar and Viktor Makarovich Zaernyuk, Russian State University of Tourism and Service, Cherkizovo, Pushkinskij r-n, Moskovskaja oblast', Russia

Pouyan Banishahabadi, Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, University Putra Malaysia

Ehsan Aliabadi, Chemical Engineering, Amirkabir Petrochemical Complex, Mahshahr, Iran

## 4:00 - 5:15, WEDNESDAY

# **Undergradaute Research Competition**

Mayang Sari II

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

### ID 088 Application of Work Study for Productivity Improvement: A Case study of a Brewing Company

Charles Mbohwa and Bupe Mwanza, University of Johannesburg, Gauteng, South Africa

## ID 089 The Impact of Maintenance Systems on Water Supply: A case Study of a Utility Company

Charles Mbohwa and Bupe Mwanza, University of Johannesburg, Gauteng, South Africa

### ID 294 Optimizing the Final Exam Scheduling Process at King Abdulaziz University

Abrar Saeed Al Amoudi, Raneem Gashgari, Lamees Alhashimi, Lujain Aljawi and Raed Obaid, King Abdulaziz University, Jeddah, Western Provence, Saudi Arabia

#### 4:00 - 5:15, WEDNESDAY

# **Project Management**

**Mayang Sari III** 

Session Chair: Mohammad Chuttur, University of Mauritius

# ID 011 Expert System Model Structure for Feasibility Study Using Strategic Planning and Systems Engineering Principles

Mohammed Alzahrani, Umm Al-Qura University, Al-Leith, Makkah, Saudi Arabia

#### ID 018 Impact of Personality Traits of Manager on the Performance of Project

Ifra Jamil, Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST), Islamabad, Pakistan.

# ID 059 A balanced approach to project management in partnering types of contract: a public private partnerships framework

Putu Mandiartha, University Malaysia Pahang, Kuantan, Pahang, Malaysia Colin F. Duffield, The University of Melbourne, VIC, Australia

### ID 104 A Case Study Assessment of Project Management Maturity Level in the Malaysia's IT Industry

Whee Yen Wong, Kar Peng Yeoh, and Seok Gee Yap, University Tunku Abdul Rahman, Selangor Darul Ehsan, Malaysia

### ID 027 Emotional Intelligence in COCOMO II for Software Cost Estmation

Mohammad Chuttur, University of Mauritius, Faculty of Engineering, Moka, Mauritius

### 4:00 - 5:30, WEDNESDAY

# **Sustianability and Green Systems**

**Mayang Sari IV** 

Session Chair: Liga Kamola, Riga Technical University, Latvia

## ID 277 Decision support framework for the Sustainability of Traditional Brass Industry - A Sri Lankan case study

Asela Kulatunga, Mahanama Dharmawardhana and Malan Jayawickrama, Faculty of Engineering, University of Peradneniya, Peradeniya, Central, Sri Lanka

Shanaka Karunarathna, University of Peradeniya, Kandy, Central, Sri Lanka

### ID 285 An AHP Based Methodology to Evaluate Social Life Cycle of an Apparel Manufacturing Plant

M. I. Rashangani, H.M.M.M. Jayawickrama, A.K. Kulatunga and C. Chandrakumar, Department of Production Engineering, University of Peradeniya, Sri Lanka

H.D.P. Premarathne, Department of Sociology, University of Peradeniya, Sri Lanka

# ID 314 Introducing of smart work – opportunity to increase economical development of municipalities in Latvia Ilze Judrupa, Riga Technical University, Riga, Latvia

# ID 484 The Significance of Riga Neighbourhoods for the Sustainable Economic Development of the City Uldis Kamols, Tatjana Survilo and Inesa Pavlova, Riga Technical University, Latvia

### ID 173 Modelling Approaches for a Sustainable Supply Chain

Vivek Sundar Magesh, TVS Logistics, Chennai, Tamil Nadu, India

# ID 478 Increasing the competitiveness of the city with energy efficiency measures possibilities for Latvian cities

Liga Kamola, Uldis Kamols, Svetlana Ivanova and Tatjana Survilo, Riga Technical University, Riga, Latvia

7:00 – 10:00 pm (Wednesday)

# **CONFERECE AWARD DINNER**

**Cultural Program by Cultural Acamedemy of Kuala Lumpur** 

**Mayang Sari Grant Ballroom** 

Award Keynote:

# **Hulas King**

Director, Diversity, Professional Affiliations & Global Community Relations

# **SIEMENS PLM Software**

St. Louis, Missouri, USA

# March 10, 2016 (Thursday)

### 08:00 - 09:15, THURSDAY

# Global Engineering Education IX

Starhill 4

Session Chair: Khairiyah Mohd Yusof, Universiti Teknologi Malaysia

08:00 - 08:25 (Thursday)

Dr. Funso Falade

Department of Civil & Environmental Engineering

University of Lagos, Akoka, Lagos, Nigeria

and

President, African Engineering Education Association

08:25 - 08:50 (Thursday)

### Dr. Amar Partap Singh Pharwaha

Dr.A.P.Singh PharwahaProfessor Department of Electronics & Communication Engineering Sant Longowal Institute of Engineering & Technology (SLIET)-Deemed University Longowal, Sangrur, Punjab, India

ID 568 Virtual Instrument for Monitoring Process Parameters: A Versatie Tool for Engineering Education
Amar Partap Singh Pharwaha, Sant Longowal Institute of Engineering and Technology (Deemed University), Punjab, India

09:00 - 09:30 (Thursday)

# Khairiyah Mohd Yusof, PhD

Director, Centre for Engineering Education (CEE) Universiti Teknologi Malaysia Johor Bahru, Malaysia

### 08:00 - 09:15, THURSDAY

# **Industry Solutions IX**

Starhill 5

Session Chair: Masaru Tezuka, Hitachi Solutions East Japan, Ltd.

08:00 - 08:40 (Thursday)

### Masaru Tezuka

Manager - Research and Development Department Hitachi Solutions East Japan, Ltd.

ID 186: Importance of the Strategic Utilization of Information Technology in Small and Medium-Sized Food Manufacturers in Japan
Masaru Tezuka and Junko Miyazaki, Hitachi Solutions East Japan, Ltd., Sendai, Miyagi, Japan
Masaki Fujiwara and Miyuki Koriki, Miyagi University, Kurokawagun, Miyagi, Japan

08:40 - 09:15 (Thursday)

### Dr. Jalaluddin Harun

**Director General** 

Malaysian Timber Industry Board (MTIB)

## 08:00 - 09:15, THURSDAY

# **Smart Manufacturing Workshop**

Starhill 6

### Dr. Rupy Sawhney

Heath Fellow in Business and Engineering Professor, Industrial and Systems Engineering University of Tennessee, Knoxville, USA

### 08:00 - 09:15, THURSDAY

## **Quality Control and Management**

Starhill 7

Session Chair: Galia Novakova Nedeltcheva, Sofia University, Bulgaria

# ID 183 A Bayesian LASSO Algorithm for Simultaneous Variation Fault Diagnosis in III Conditioned Multistage Manufacturing Processes

Sandipan Karmakar and Jhareswar Maiti, IIT Kharagpur, West Bengal, India

### ID 199 Review on some Multivariate Statistical Process Control Methods for Process monitoring

Arian Dhini and Isti Surjandari, Universitas Indonesia, Depok, West Java, Indonesia

### ID 361 Process Variability Analysis of License Vehicle Number Plate Production in Nigeria

Stephen Nwanya Oluseyi Ajayi and Felix Ishola, Covenant University, Cannanland, Ota, Ogun State, Nigeria Celestine Achebe, University of Nigeria, Nsukka, Enugu State, Nigeria

# ID 221 Motion and Time Study: Measurement of Workstation for Piston Assembly Line Considering Anthropometric For Indonesian People

Teuku Yuri M. Zagloel and Inaki Maulida Hakim, Department of Industial Engineering, Universitas Indonesia, Depok, West Java, Indonesia

### ID 212 Rework Impact on BIW Production System Optimization Using Six Sigma Analysis

Galia Novakova Nedeltcheva, Sofia University, Faculty of Mathematics and Informatics, Sofia, Bulgaria Hayder Zghair, Lawrence Technological University, Detroit, MI, United States

### 08:00 - 09:15, THURSDAY

# Logistics Management I

Starhill 8

Session Chair: Sirajuddin Sirajuddin, University of Indonesia

### ID 196 Asssessment of Thai Check Point for Border Trade Operations

Jirapat Wanitwattanakosol, College of Arts, Media and Technology, Chiang Mai University, Thailand Sooksiri Wichaisri, Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Thailand Tisinee Surapunt, College of Arts, Media and Technology, Chiang Mai University Muang Chiang Mai Thailand Thaneeya Chaiwongbud, Information System Management Research Unit, College of Arts, Media and Technology, Chiang Mai University, Muang, Chiang Mai, Thailand

### ID 249 A Practical Case Study of a Heterogeneous Fleet Vehicle Routing Problem with Various Constraints

Kusuma Soonpracha and Anan Mungwattana, Department of Industrial Engineering, Kasetsart University, Chatuchak, Bangkok, Thailand

Tharinee Manisri, Sripatum University, Jatujak, Bangkok, Thailand

# ID 490 A Novel Multi-Objective and Multi-Criteria Decision Support System for Logistic Management during Flood Disaster

Ainul Akmar Mokhtar, Masdi Muhammad and Nurul Rawaida Ain Burhani, Universiti Teknologi Petronas, Tronoh, Perak, Malaysia

### ID 060 Production Optimization Problem under Carbone emission Constraint

Hajej Zied, Nidhal Rezg and Bouslikhane Salim, LGIPM, METZ, LORRAINE, France

## ID 518 Improving Indonesian logistics performance with using six sigma, DMAIC and integration Process

Sirajuddin Sirajuddin, University of Indonesia, Kota Depok, Indonesia

#### 08:00 - 09:15, THURSDAY

# IE /OM in Asia

Bintang V

Session Chair: Md. Mizanur Rahman, Universiti Teknologi Malaysia

### ID 354 Facility and Process Layout Analysis of an SME using Simulation: A Case Study of a Manufacturing Company

Onkar P, Vimal Kumar, Pratima Verma, Suraj Pratap Singh and Jitendra Katiyar, Indian Institute of Technology Kanpur, Uttar Pradesh, India

## ID 397 Save water to save our next generation

Md. Mizanur Rahman, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia

Md. Kawsar Ali and Jahangir Alam, Comfit Composite Knit Ltd., Mirzapur, Tangail, Bangladesh

### ID 508 The Influence of Industrial Engineering in Semiconductor Fabrication Factory Optimization

Mohd Razali Muhamad, Universiti Teknikal Malaysia Melaka, Malaysia Mohd Azizi Chik, SilTerra Malaysia, Kulim, Kedah, Malaysia

### ID 625 A Review on Operation Diagnosis and Identification of Operation Improvement

Edly Ferdin Ramly, follow by Mohd Shahir Yahya and Musli Mohammad, Universiti Tun Hussein Onn Malaysia, Johor, Malaysia

### ID 672 Industrial Logistic Performance Evaluation: A Case of Printing and Packaging Company in Thailand

Kanda Boonsothonsatit, Institute of Field Robotics, King Mongkut's University of Technology Thonburi, Bangkok, Thailand Suwaphit Buabuthr, Institute of Field Robotics, King Mongkut's University of Technology Thonburi, Bangkok, Thailand

### 08:00 - 09:15, THURSDAY

# **Artificial Intelligence**

Bintang VI

Session Chair: Baouche Rafik, University of Boumerdes, Algeria

### ID 238 Model development to monitor and control energy consumption in South Africa

Oludolapo A. Olanrewaju and Therese Van Wyk, Department of Industrial Engineering, Vaal University of Technology, Vanderbijlpark, South Africa

### ID 667 Applying Fuzzy Inference System Tsukamoto for Decision Making in Crude Palm Oil Production Planning

Abdul Talib Bon and Silvia Firda Utami, Department of Production and Operations Management, Universiti Tun Hussein Onn Malaysia, Parit Raja, Johor, Malaysia

#### ID 485 Impact of Change Orders in Construction Sector in the West Bank

Ayham Jaaron, Mohammad Othman and Mujahed Staiti, An-Najah National University, Nablus, West Bank, Palestine

### ID 213 Using fuzzy set theory for determining toxicity thresholds of product

Nouara Ouazraoui, Rachid Nait Said and Mouloud Bourareche, Laboratory of Research in Industrial Prevention (LRIP), Health and Occupational Safety Institute, University of Batna, Batna 05000, Algeria

# ID 002 Facies Analysis and Permeability/porosity Prediction from well log data using the Non Parametric Regression with Multivariate Analysis and Neural Network in the Reservoirs of the Hassi R'Mel Southern Field (Algeria)

Baouche Rafik, University of Boumerdes, Algeria Baddari Kamel, University of Bouira, Algeria

### 08:00 - 09:15, THURSDAY

## **Healthcare Systems**

**Bintang VII** 

Session Chair: Md. Liakot Ali, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

### ID 202 Fabrication of Fracture Aid Using Rapid Prototyping

Gopu Govindasamy, Nivedha Balakrishnan, Saranya Sureshkumar and Suvitha Subramaniam, Sri Ramakrishna Engineering College Coimbatore, India

# **ID 554** A Discrete-Event and Agent-Based Hybrid Simulation Approach for Healthcare Systems Modeling and Analysis Amr Eltawil, Mohammed Abdelgalil and Sameh Abdou, Egypt Egypt-Japan University for Science and Technology, New Borg El Arab, Alexandria, Egypt

# ID 607 Logistic tools for increased the level of opportunity in the intervention in patients with hip fracture at "Hospital Universitario Mayor Mederi" case

Valeria Mendoza Cortes, Universidad Del Rosario, Bogotá, Colombia

## ID 608 Inventory - A Tool to Improve Hospital Management

Valeria Mendoza Cortes, Universidad Del Rosario, Bogotá, Colombia

### ID 656 A Model of a Secured Smart e-Health System

Md. Liakot Ali, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh Mohammad Tauhidul Alam, Bangladesh Bank, Dhaka, Bangladesh

### **08:00 – 09:15, THURSDAY**

# **Modeling and Simulation**

Mayang Sari I

Session Chair: Andrew Abah, University of Nigeria

### ID 499 Tolerance Analysis using an alternative to Monte Carlo simulation

Mohamed Gadallah, Cairo University, Giza, Egypt

Omnia Fadel, Mohamed Zaghloul and Hanan Kouta, Port Said University, Port Said, Egypt

# ID 587 Effect of Information Sharing and Capacity Adjustment on Healthcare Service Supply Chain: The Case of Flood Disaster

Ali Anjomshoae, Universiti Teknologi Malaysia, Johor, Johor Bahru, Malaysia

# ID 637 Placement of Solar-Wind Hybrid Power Plant in Iran with using AHP algorithm and technical and economic evaluations by HOMER software

Mehrdad Hajizadeh, Hormozgan Electric Power Distribution Company and Islamic Azad University of Semnan, Iran Faramarz Faghihi and Hamed Joorabli, Islamic Azad University of Semnan, Iran

### ID 502 Predicting the Development Time of Platform for Multiple-Generation Product Using Artificial Neural Network

Amalia Suzianti, Nabila Priscandy Poetri and Nauli Dwi Fileinti, Universitas Indonesia, Depok, West Java, Indonesia

### ID 358 Development of Facility Utilization Model for Use in Ajaokuta Steel Complex

Stephen Nwanya, Oluseyi Ajayi and Obafemi Olatunji, Covenant University, Cannanland, Ota, Ogun State, Nigeria Andrew Abah, University of Nigeria, Nsukka, Enugu State, Nigeria

### 08:00 - 09:15, THURSDAY

# Reliability and Maintenance

Mayang Sari II

Session Chair: Maruf Hasan, University of New South Wales, Sydney, Australia

# ID 496 A New Software Reliability Growth Model with Introduction of New Defects in the Test Process

Zelong Yi, Shenzhen University, Shenzhen, Guangdong, China

# ID 514 Reliability and Maintainability Parameters Estimation under Imperfect Repair and Maintenance by Genetic Algorithm

Mootaz Ghazy, Ahmed Farouk and Amr Hassnien, Arab Academy for Science and Technology and Maritime, Alexandria, Egypt

# ID 617: Determination of Safety instrumented level using Fuzzy Risk Graph method Case study: Heater of oil & gas industry

Rabah Bilal and Tadjine Kamel, Department of Mechanical Engineering, Industrial risks laboratory, Badji Mokhtar University, Annaba, Algeria

### ID 511 The history and development of six sigma quality management

Maruf Hasan and Maxwell Chiu, University of New South Wales, Sydney, NSW, Australia

### 08:00 - 09:15, THURSDAY

# **Proejct Management**

**Mayang Sari III** 

Session Chair: Agnese Travaglini, Politecnico di Milano, Milan, Italy

## ID 392 Project Management: A Complete Paradigm for Pakistani Public and Private Educational Institutions

Majid Baseer and Muhammad Arsalan, Sarhad University of Science and Information Technology, Peshawar, Pakistan

### ID 470 The Role of Management Control System in ERP Project Implementation

Pratima Verma, IIT Kanpur, Kanpur, UP, India

# ID 536 Personal Competency Assessment and Competence Building: A Study of Pakistani Project Management Scholars

Sara Siddique, Center for Advanced Studies in Engineering, Islamabad, Pakistan

### ID 306 A Survey of Routing Protocols of Wireless Sensor Network with Mobile Sinks

Keerthika Asokan and Berlin Hency Victor, VIT University, Chennai, Tamilnadu, India

### ID 365 Megaproject case studies: A stakeholder management perspective

Mauro Mancini and Agnese Travaglini, Politecnico di Milano, Milan, Italy Ivana Burcar Dunovic, University of Zagreb, Zagreb, Croatia

### 08:00 - 09:15, THURSDAY

# **Modeling and Simulation**

**Mayang Sari IV** 

Session Chair: Alessandro Navarra, Universidad Católica del Norte, Antofagasta, Chile

## ID 126 Selecting the best layout for the container terminal using Modeling and Simulation Techniques

Asela Kulatunga, Faculty of Engineering, University of Peradneniya, Peradeniya, Central, Sri Lanka Chanjief Chandrakumar, Faculty of Engineering, University of Peradeniya, Badulla, UVA, Sri Lanka Gowrynathan Jeyanthinathasarma, Faculty of Engineering, University of Peradeniya, Sri Lanka Nadarasa Sanjeevan, University of Peradeniya, Vavuniya, Sri Lanka

### ID 145 Temperature Distribution using Zone Models for Radiative Sections of Fired Process Heaters

Ali ElKamel, University of Waterloo, Waterloo, Ontario, Canada Rois Fatoni, Chemical Engineering Department, Universitas Muhammadiyah Surakarta, Indonesia Muhammad Bujwa, University of Waterloo, Waterloo, ON, Canada

## ID 167 The dynamics of Indonesian rice supply chain

Alan Dwi Wibowo, Universitas Lambung Mangkurat, Banjarmasin, Kalimantan Selatan, Indonesia Armand Omar Moeis, Universitas Indonesia, Depok, Jawa Barat, Indonesia

### ID 367 Sensitivity Analysis in Optimization of Multiple Cyclone Arrangements

Muhamad Fariz Failaka and Ali Elkamel, Department of Chemical Engineering, University of Waterloo, Ontario, Canada Fethi Bellamine, National Institute of Applied Science and Technology, Tunis Cedex, Tunisia

## ID 133 Debottlenecking of Conventional Copper Smelters

Alessandro Navarra, Universidad Católica del Norte, Antofagasta, Chile Roberto Parra, Univerisdad de Concepción, Concepción, Bio Bio, Chile Boyd Davis, Kingston Process Metallurgy Inc., Kingston, Ontario, Canada Frank Mucciardi, McGill University, Montreal, Quebec, Canada Seng How Kuan, Universiti Tunku Abdul Rahman, Kajang, Selangor, Malaysia

## 9:30 - Thursday Morning Keynote:

## Dr. Hans-Juergen Hoyer

Secretary General of the International Federation for Engineering Education Societies (IFEES)

Executive Secretary of the Global Engineering Deans Council (GEDC) and
Resident Scholar in Global Engineering at Marquette University, USA

Mayang Sari Grand Ballroom

## 10:15 - Thursday Morning Keynote:

### Prof. Dr. Noraini Kaprawi

Director of Strategic and Quality Management Office Faculty of Technical and Vocational Education University of Tun Hussein Onn Malaysia Mayang Sari Grand Ballroom

11:00 - Networking Break - Exhibition Hall

#### 11:30 - 12:45. THURSDAY

# **Global Engineering Education X**

Starhill 4

Session Chair: Dr. S. C. Naik, National Institute of Technology, Rourkela, Odisha, India

11:30 - 11:55 (Thursday)

Kamel Hawwash BSc, MSc, MAPM, FHEA Professor in the School of Civil Engineering University of Birmingham, UK Immediate Past President of SEFI Member of the European Engineering Deans Council

11:55 - 12:20 (Thursday)

## Dr. Charles Mbohwa

Professor and Vice-Dean Postgraduate Studies, Research and Innovation Faculty of Engineering and the Built Environment (FEBE) University of Johannesburg's (UJ) South Africa

12:20 - 12:45 (Thursday)

### Dr. S. C. Naik

Professor, Former Head of Chem Engg and Dean National Institute of Technology, Rourkela, Odisha, India Past President, The Institution of Engineers Past Vice-President, The Federation of Engineering Institutions in South & Central Asia

"Engineering Education and Environment"

### 11:30 - 12:45, THURSDAY

# **Industry Solutions X**

Starhill 5

Session Chair: Resh Plaha, Crystal Quality UK Ltd

11:30 - 12:20

## Mr. Takenori Kabeya

Senior Engineer and IT Specialist of Production, Sales and Inventory Solution Department Business Solution Division
Hitachi Solutions East Japan, Ltd.

Designing demand and supply operation tailored to industry sector and business category

12:20 – 12:45 **Ms. Resh Plaha** Crystal Quality UK Ltd

Publication of BS EN ISO9001:2015 Quality Management Systems, its Global significance to Organisations

11:30 - 12:45, THURSDAY

# **Smart Manufacturing Workshop**

Starhill 6

## Dr. Rupy Sawhney

Heath Fellow in Business and Engineering Professor, Industrial and Systems Engineering University of Tennessee, Knoxville, USA

11:30 - 12:45, THURSDAY

# **Quality Control and Management**

Starhill 7

Session Chair: Vimal Kumar, Indian Institute of Technology Kanpur, India

### ID 322 Multi-Attribute Control Chart Design for Bronze Pipe Fittings Production

I.B.N. Sanditya Hardaya, Aditya Putra Setyana, Isti Surjandari and Arian Dhini, Universitas Indonesia, Depok, Indonesia

### ID 628 Improvement of Test Cell Utilization Using Six Sigma Methodology

S.P.Srinivasan, Mechanical Engineering, Rajalakshmi Engineering College, Chennai, India P. Malliga, Industrial Engineering, Anna University, Chennai, India

### ID 638 A Model to Assess Quality of Disaster Reliief Efforts

Manoj Pokkiyarath, Amrita Business School, Bangalore, India

Bishu Ramaratnam, Department of Mechanical and Materials Engineering, University Of Nebraska-Lincoln, Nebraska, USA

### ID 639 Development of Root Cause Analysis Tool for Control Chart

Hari Agung Yuniarto, Industrial Engineering, Universitas Gadjah Mada, Sleman, D. I. Yogyakarta, Indonesia Wilhelmus Abisatya Pararta, PT ASTRA Daihatsu Motor, North Jakarta, DKI Jakarta, Indonesia

### ID 217 Relating Left/Right Brained Dominance Types of Leaders to TQM Focus: A Preliminary Study

Vimal Kumar, Indian Institute of Technology Kanpur, Uttar Pradesh, India

## 11:30 - 12:45, THURSDAY

# Logistics Management II

Starhill 8

Session Chair: Mandy Taha, Alexandria University, Egypt

## ID 056 Transforming green logistics practice into benefits - A case of 3PLs

Noorliza Karia and Muhammad Hasmi Abu Hassan Asaari, Universiti Sains Malaysia, USM, Penang, Malaysia

# ID 092 The Analysis of Airport Operational Performance Case Study: Chiangmai International Airport, Thailand Tipavinee Suwanwong, Chiang Mai University, Muang District, Chiang Mai, Thailand

# ID 295 Model and Simulation Design of Stacking Rules in Container Terminal with Discrete Event Simulation Approach Armand Omar Moeis and Muhammad Harisuddin, University of Indonesia, Depok, West Java, Indonesia

## ID 629 Near Optimal Solution for Green Vehicle Routing Problem

Mandy Taha, Production Engineering Department. Alexandria University, Alexandria, Egypt Amr madkour, Military Technical College, Kobry Elkobbah, Cairo, Egypt

### 11:30 - 12:45, THURSDAY

# **Inventory Management**

**Bintang V** 

Session Chair: Ehsan Shekarian, University of Malaya, Kuala Lumpur, Malaysia

#### ID 222 Value Chain Optimization in Overseas Procurement

Aman Sinha, Bher India LTD., Pune, Maharashtra, India

Deepak Chandra, National Institute of Industrial Engineering, Mumbai, India

ID 337 Analyzing optimization techniques in inventory models: the case of fuzzy economic order quantity problems Ehsan Shekarian, Nima Kazemi, Ezutah Udoncy Olugu and Salwa Hanim Abdul-Rashid, University of Malaya, Kuala Lumpur, Malaysia

### ID 140 Improvising Operational Productivity of Inventory Management in a Retail Store

Akshay S. and Mridula Sahay, Amrita Business School, Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu, India

### ID 300 The effect of human learning with cognitive and motor capabilities on a fuzzy EOQ model

Ehsan Shekarian, Nima Kazemi, Ezutah Udoncy Olugu, Salwa Hanim Abdul-Rashid and Raja Ariffin Bin Raja Ghazilla, University of Malaya, Kuala Lumpur, Selangor, Malaysia

### 11:30 - 12:45, THURSDAY

## **Artificial Intelligence**

**Bintang VI** 

Session Chair: Ali Asghar Heidari University of Tehran, Iran

ID 315 Evaluations of Crossover and Mutation Probability of Genetic Algorithm in an Optimal Facility Layout Problem Maricar Navarro, Technological Institute of the Philippines, Quezon City, National Capital Region, Philippines

# ID 120 Two Calibrated Metaheuristic Algorithms for Solving a Multi-Plant Capacitated Lot-Sizing Problem in an Integrated Production-Distribution Network

Maryam Mohammadi and S. Nurmaya Musa, University of Malaya, Kuala Lumpur, Malaysia

### ID 374 Conceptual Framework for Using System Identification in Reservoir Production Forecasting

Berihun Mamo Negash, Universiti Teknologi Petronas, Bandar Seri Iskandar, Perak Darul Ridzuan, Malaysia

# ID 643 Let a CPSO+ algorithm explore your high-quality shortest paths: an effective chaos-enhanced PSO-based strategy

Ali Asghar Heidari and Rahim Abaspour, University of Tehran, Iran

### 11:30 - 12:45, THURSDAY

## Lean and Six Sigma

**Bintang VII** 

Session Chair: Taiwo Samuel, Olabisi Onabanjo University, Nigeria

## ID 426 Production Management Model Integrating Green and Lean Six Sigma

Cherrafi Anass, Khalid Benhida, Ahmed Mokhlis, Fatima Zohra Elamrani and Elfezazi Said Cadi Ayyad University, Safi, Morocco

## ID 579 Improvement of the Production Process via Kaizen: Case Study of wiring company

Ilham Kissani, Al Akhawayn University, Ifrane, Morocco

# ID 586 Solving Quality Issues in Automotive Component Manufacturing Environment by utilizing Six Sigma DMAIC Approach and Quality tools

Mohd Norzaimi Che Ani, Manufacturing Engineering Section, Universiti Kuala Lumpur – Malaysian Spanish Institute, Kulim, Kedah, Malaysia

Ishak Abdul Azid, Mechanical Engineering Section, Universiti Kuala Lumpur – Malaysian Spanish Institute, Kulim, Kedah, Malaysia Shahrul Kamarudin, Mechanical and Industrial Engineering Department, Universiti Teknologi Petronas, Tronoh, Perak, Malaysia

### ID 653 Anthropometric Data Variation Within Gari-frying Population

Taiwo Samuel, Olabisi Onabanjo University, Ago-Iwoye, Ogun, Nigeria

#### ID 658 Sustainable Product Innovation for Customer Experience: A Conceptual Framework

Michael Mutingi, School of Engineering, Namibia University of Science & Technology, Windhoek, Namibia and Faculty of Engineering & the Built Environment, University of Johannesburg, Johannesburg, South Africa

Charles Mbohwa, Faculty of Engineering & the Built environment, University of Johannesburg, Johannesburg, South Africa Herbert Mapfaira, Mechanical Engineering Department, University of Botswana, Gaborone, Botswana

### 11:30 - 12:45, THURSDAY

## **Case Studies**

Mayang Sari I

Session Chair: Pornwasin Sirisawat, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand

ID 362 Energy sector process control system to ensure achievement of energy efficiency targets in Latvia: a case study Ineta Geipele, Institute of Civil Engineering and Real Estate Economics, Riga Technical University, Riga, Latvia Gita Actina, Energy Efficiency Center, Institute of Physical Energetics, Riga, Latvia Sanda Geipele, Institute of Civil Engineering and Real Estate Economics, Riga Technical University, Riga, Latvia Namejs Zeltins, Energy Efficiency Center, Institute of Physical Energetics, Riga, Latvia

**ID 668** Relationship between Human Errors in Maintenance and Overall Equipment Effectiveness in Food Industries
Yunos Ngadiman, Nor Aziati Abd Hamid, Rohaizan Ramlan and Liew Kai Boon, Department of Production and Operation
Management, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

### ID 459 Numerical Study of Non-Premixed Combustion of Pulsed Swirling Co-axial Jets

Shiferaw Regassa Jufar and Berihun Mamo Negash, Department of Petroleum Engineering, Universiti Teknologi Petronas, Perak Darul Ridzuan, Malaysia

### ID 596 Towards Risk Managed Cloud Adoption - A Conceptual Framework

Anil Kumar Saini, University School of Management Studies, New Delhi, India Shikha Gupta, Ansal University, Gurgaon, Haryana, India Kulbhushan Saxena, FIIB, Gurgaon, Haryana, India

### ID 106 A Study of Green Procurement Practices: A Case Study of the Computer Parts Industry in Thailand

Pornwasin Sirisawat and Tossapol Kiatcharoenpol, Department of Industrial Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand

Ninlawan Choomrit and Pilada Wangphanich, Department of Industrial Engineering, Srinakharinwirot University, Bangkok, Thailand

### 11:30 - 12:45, THURSDAY

# Sustainable Manufacturing

Mayang Sari II

Session Chair: Ahmad Mubin, University of Muhammadiyah Malang, Jawa Timur, Indonesia

### ID 431 FSMER - Systematic Approach for Modeling of Energy- and Resource-Efficient Factories

Hendrik Hopf and Egon Müller, Technische Universität Chemnitz, Germany, Chemnitz, Germany

# ID 452 Enabling CMOS 0.13µm technology at 0.18um equipment platform on 200mm Semiconductor Manufacturing Industry

Thung Beng Joo and Kader Ibrahim, Silterra Malaysia Sdn BhdKulim, Kedah, Malaysia

Nurulfajar Bin Abd Manap and Fauziyah Binti Salehuddin, Universiti Teknikal Malaysia Melaka, Durian Tunggal, Melaka, Malaysia

### ID 645 Sustainable Suppliers' Selection in Ready-Made Garments: Toward Sustainable Manufacturing

Maha Morssi, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Alexandria, Egypt

## ID 455 Development of Comprehensive WIP Performance Monitoring Systems for Semiconductor Fabrication Foundry

Mohamad Zambri Mohd Darudin. Silterra Malaysia Sdn. Bhd., Kulim, Kedah, Malaysia

Nor' Azah binti Khusairi. Silterra Malaysia Sdn. Bhd., Kulim Hi

Hasbullah Haji Ashaari, School of Technology Management and Logistic, Universiti Utara Malaysia, Kedah, Malaysia

# ID 311 Development of Sustainable Performance Measurement System for Electronic and Plastics Industrial Cluster Based Industrial Symbiosis Scenario in the Industrial Estate

Ahmad Mubin, University of Muhammadiyah Malang, Jawa Timur, Indonesia

## 11:30 – 12:45, THURSDAY Service Systems and Service Management

**Mayang Sari III** 

Session Chair: Aziz E. ElSayed, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt

## ID 035 Activating Organizational Learning Capabilities through Service Operations Design

Christopher Backhouse, Loughborough University, Loughborough, Leicestershire, United Kingdom Ayham Jaaron, An-Najah National University, Nablus, West Bank, Palestine

### ID 578 The Role of Service Providers on Cloud Computing Technology for a Sustainable Computer Network

Ramesh Chandra Rath, Einstein Academy of Technology and Management, Khordha, Bhubaneswar, Odisha, India

### ID 588 Developing KPIs for organizations with similar objectives

Charles Mbohwa, Jan Harm Christiaan Pretorius and Edoghogho Ogbeifun, University of Johannesburg, Gauteng, South Africa

# **ID 099** D-Optimal Equivalent-Estimation Second-Order Strip-Strip-Plot Designs for Three Multi-Stage Processes Prapassorn Tantiphanwadi and Prapaisri Sudasna na Ayudthya, Kasetsart University, Chatuchak, Bangkok, Thailand

### ID 456 Network Management and Bandwidth Resource Allocation in Educational Institutions

Aziz E. ElSayed, Pakinam El Touby and Hala A. Farouk, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Abu-Kir, Egypt

### 11:30 - 12:45, THURSDAY

# **Modeling and Simulation**

**Mayang Sari IV** 

Session Chair: Basel Aleideh, Kuwait University

# ID 339 Application of Monte Carlo Analytic Hierarchical Process (MCAHP) in the Prioritization of Theme Park Service Quality Elements

Lindley Bacudio, Mc Joren Banzon and Michael Angelo Promentilla, De La Salle University, Manila, Philippines

**ID 373** History matching of the PUNQ-S3 reservoir model using proxy modeling and multi-objective optimizations Berihun Mamo Negash, Universiti Teknologi Petronas, Bandar Seri Iskandar, Perak Darul Ridzuan, Malaysia

ID 404 Numerical Modelling and Optimization of Square Microneedle Array for Efficient Transdermal Drug Delivery Raja Rajeswari Nachiappan, Saveetha Engineering College, Anna University, Chennai, TamilNadu, India

# ID 493 Impact of the geometrical parameters of labyrinth seal on the efficiency of gas pumping unit

Bellaouar Abderrahmane, University of Laghouat, Laghouat, Algeria, Algeria Volodimir Kopey, Ivano-Frankivsk National Technical University of Oil and Gas, Ivano-Frankivsk, Ukraine Mokhtar Aouissi, Mechanical Engineering Laboratory, Amar Telidji University of Laghouat Laghouat, Laghouat, Algeria

# ID 440 Statistical Analytical Study of Traffic Accidents and Violations in the State of Kuwait and its Social and Economic Impact on the Kuwaiti Society

Basel Aleideh, Kuwait University, Showaikh, Kuwait City, Kuwait

# 1:00 pm Thursday Lunch Keynote: Rajiv Ghatikar

Vice President and General Manager Siemens PLM, ASEAN/Australasia

Mayang Sari Grand Ballroom

14:00 - Networking break - Exhibition hall

## 2:30 - 3:45, THURSDAY

# **Global Engineering Education XI**

Starhill 4

Session Chair: Dr. Hamid Parsaei, Texas A&M University

2:30 - 2:55 (Thursday)

### Professor Khedidja Allia

Research Laboratory of Science in Industrial Process Engineering (LSGPI)

USTHB - FGMGP, Bâb-Ezzouar

Algiers- Algeria

ID 546 Trends in engineering education: Programs' content, implementation to meet current challenges.

2:55 - 3:20 (Thursday)

Shri. Mahesh Anant Kakade

MIE, MISTE, MIV, MIEEES

Controller of Examinations, Shivaji University, Kolhapur

Chairman, Indian Society for Technical Education

Maharashtra- Goa Section, India

3:20 - 3:45 (Thursday)

### Dr. Hamid Parsaei, PE

Professor of Industrial and Systems Engineering

Texas A&M University (College Station)

and

Professor of Mechanical Engineering and Director of Academic Outreach

Texas A&M University Qatar

### 2:30 - 3:45, THURSDAY

# Industry Solutions XI

Starhill 5

Session Chair: Johann Ong, SilTerra Malaysia Sdn Bhd, Kulim, Kedah, Malaysia

2:30 - 2:55 pm

### **Parth Rashmikant Patel**

Executive Director Apollo Techno Equipments Limited Ahmedabad, Gujarat, India

2:55 - 3:20 pm

### Johann Ong

SilTerra Malaysia Sdn Bhd Kulim, Kedah, Malaysia

ID 457 Eliminate Salicide Residues in Wafer Fabrication Front-End Pre-Metal Layer Cleaning Process
Johann Ong and Bee Hoon Tan, SilTerra Malaysia Sdn Bhd, Kulim, Kedah, Malaysia

3:20 - 3:45 pm

### Dr. D. Muruganandam

Production Engineering Department Sri Sairam Engineering College Chennai, India

### 2:30 - 3:45, THURSDAY

# **Smart Manufacturing Workshop**

Starhill 6

## Dr. Rupy Sawhney

Heath Fellow in Business and Engineering Professor, Industrial and Systems Engineering University of Tennessee, Knoxville, USA

### 2:30 - 3:45, THURSDAY

# **Reliability and Maintenance**

Starhill 7

Session Chair: Joe Amadi-Echendu, University of Pretoria, Gauteng, South Africa

### ID 005 Optimized Measures to Improve TAT in Product Maintenance

Vinay V Kabadi, Lokesha, R. and Tanoy Kumar Paul, DF&PD, Siemens, Bangalore, India

# ID 050 Development of a condition index matrix to support technical feasibility of life extension in the offshore oil and gas industry

Mahmood Shafiee and Isaac Animah, Cranfield University, Bedford, Bedfordshire, United Kingdom

### ID 058 Prediction of Failures by Using Crow/AMSAA Model in Microsoft Excel

Masdi Muhammad, Tahir Raza and Mohd Amin Bin Abd Majid, Universiti Teknologi Petronas, Tronoh, Perak, Malaysia

### ID 080 Identifying Optimal Intervene Hazard for Cutting Tools Considering Cost-availability Optimization

Soumaya Yacout, École Polytechnique, Montreal, Quebec, Canada Yasser Shaban, Faculty of Engineering, Helwan University, Cairo, Egypt

# ID 083 An empirical case study of engineering asset management decision making in an electrical utility

Joe Amadi-Echendu and Ouma Bosaletsi, University of Pretoria, Gauteng, South Africa

### 2:00 - 8:00, THURSDAY

# **Entreprenuership Workshop**

Starhill 8

## 2:00 to 8:00 pm

### **Professor Donald M. Reimer**

Director of Entrepreneurial Programs
College of Engineering
Lawrence Technological Univeristy
Southfield, Michigan, USA

### 2:30 - 3:45, THURSDAY

# Sustainable Manufacturing

Bintang V

Session Chair: Mohd Nizam Ab Rahman, Universiti Kebangsaan Malaysia

### ID 266 Augumenting Excellence in Manufacturing: A Strategic Dynamic Approach

Mridula Sahay, Amrita Business School, Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu, India

### ID 303 Identification of Energy Efficiency Measures during Factory Planning Processes

Manuela Krones and Egon Müller, Technische Universität Chemnitz, Chemnitz, Saxony, Germany

## ID 428 ProSET: A Decision Support System for Sustainability Performance Evaluation

Muhamad Zameri Mat Saman, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia Mohd Fahrul Hassan, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia Safian Sharif, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia

### ID 495 The Challenge in Malaysian Industries in Implementing Design of Experiment

Mohd Nizam Ab Rahman, Haris Jamaluddin, Jaharah A .Ghani and Baba Md Deros, Universiti Kebangsaan Malaysia / National University of Malaysia, Bangi, Selangor, Malaysia

# ID 623 Waste management for sustainable development in industrial parks. A case study of Wadesville industrial area, Johannesburg

Tatenda T Chingono and Charles Mbohwa, Department of Quality and Operations Management, FEBE, University of Johannesburg, Johannesburg, South Africa

#### 2:30 - 3:45. THURSDAY

# **Computer and Computing**

**Bintang VI** 

Session Chair: Hanane Zermane, Batna 2 University, Algeria

### ID 240 Development of a Computer Aided Learning Tool for PIC Microcontroller

Md. Liakot Ali and Mainur Rahman, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

### ID 636 Prediction of Oil Well Flowing Bottom-hole Pressure in Petroleum Fields

Medhat Awadalla and Hassan Yousef, SQU, Muscat, Oman

# ID 681 Decision Analysis View of Higher Education Planning Activities of Admission and Recourses Allocation in Oman

Mahmood Al Kindi, Mechanical and Industrial Engineering, Sultan Qaboos University, AlKhoud, Oman

## ID 718 Organizational factors for implementing TQFD

Hari Krishnan Thampi and Pramod V. R., N.S.S College of Engineering, Palakkad, Kerala, India Abdul Samad K., Malabar Cements Ltd., Palakkad, Walayar, Kerala 678624, India

### ID 065 Development of an internet-based fuzzy control system of manufacturing plant

Hanane Zermane and Hayet Mouss, Batna 2 University, Batna, Algeria

#### 2:30 - 3:45, THURSDAY

# Systems Engineering

**Bintang VII** 

Session Chair: Nouara Ouazraoui, University of Batna-Algeria, Batna, Algeria

### ID 174 Literature review of Industrial Competitiveness Index: research gap

Teuku Yuri M. Zagloel and IB Putra Jandhana, Department of Industrial Engineering, University of Indonesia, Depok, West Java, Indonesia

# ID 182 PSI-Cockpit: A Supply-Demand Planning System Focusing on Achieving Goals through Resolving KPI Conflicts

Shintaro Urabe, Satoshi Munakata and Huang Shuangguan, Hitachi Solutions East Japan, Ltd., Sendai, Miyagi, Japan

### ID 659 The Impact of Quality Management Tools in Municipal Water Distributors: Case of Namibia

Michael Mutingi, School of Engineering, Namibia University of Science & Technology, Windhoek, Namibia and Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa

Timothy Silombela and Damas Mashauri1, School of Engineering, Namibia University of Science & Technology, Windhoek, Namibia

Charles Mbohwa, Faculty of Engineering and the Built Environment University of Johannesburg, Johannesburg, South Africa

### ID 612 Remote Global Alignment Error for Pad Inductor Layer to Improve the Cycle Time

Saandilian Devadas, Silterra Malaysia Sdn. Bhd, Kulim, Kedah, Malaysia

Shajahan Maidin, Universiti Teknikal Malaysia, Melaka, Durian Tunggal, Melaka, Malaysia

Tritham Wara, Leng Kok Hong and Nurul Ayu Hashim, Silterra Malaysia Sdn. Bhd., Kulim, Kedah, Malaysia

# ID 204 Modified Barrier and Operational Risk Analysis using Bayesian approach: Towards Bayesian-BORA methodology

Nouara Ouazraoui, University of Batna-Algeria, Batna, Algeria

Mouloud Bourareche, Health and Occupational Safety Institute, University of Batna, Batna, Algeria

Rachid Nait Said, University of Batna-Algeria, Batna, Algeria

#### 2:30 - 3:45, THURSDAY

# **Engineering Economy**

Mayang Sari I

Session Chair: Thabit Sultan Mohammed, Dhofar University, Oman

# ID 383 Analyzing the Success Rate of Strategic and Tactical Economic Sanctions; A strategy for Russian economic planning

Seyed Amirhossein Alavifar and Viktor Makarovich Zaernyuk, Russian State university of Tourism and Services, Moscow, Russia

#### ID 543 Using Mathematical Programming for Investment Assessment and Optimal Investment

Hohyun Lee, Jinwoo Lee and Myeonghun Ji, Data Science Lab, Paul Math School, Goesan-gun, Chungcheongbuk-do, Korea

#### ID 180 Cost Minimization in Data Batch Processing

Alyaa Abdulameer, Abdulrahim Shamayleh and Malick Ndiaye, Industrial Engineering Department, American University of Sharjah, Sharjah, United Arab Emirates

### ID 524 Low Energy and Low Cost Freshwater Production by Membrane Distillation

Rubina Bahar, Tasnim Firdaus Ariff and Mohammad Jabed Perves Bappy, International Islamic University Malaysia, Kuala Lumpur, Malaysia

### ID 264 Remote-Controlled Microcontroller-Based Temperature System: An Economical Design

Thabit Sultan Mohammed, Dhofar University, Salalah, Dhofar, Oman

## 2:30 - 3:45, THURSDAY

# Sustainability and Green Systems

Mayang Sari II

Session Chair: Liga Kamola, Riga Technical University, Latvia

## ID 454 Measuring Product Sustainability Using Fuzzy Method

Muhamad Zameri Mat Saman, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia Abdul Rahman Hemdi, Universiti Teknologi Mara, Permatang Pauh, Pulau Pinang, Malaysia Safian Sharif, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia Salwa Mahmood, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia

### ID 670 On-Grid Solar Power Systems with Net Metering and Solar Irradiance in Pakistan

Hafsa Qamar, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi, KPK, Pakistan

# ID 069 Introducing of smart work – opportunity to increase economical development of municipalities in Latvia Ilze Judrupa, Riga Technical University, Riga, Latvia

## ID 472 Ontology-Based User Guidance for Energy Efficiency Optimization Measures

Markus Brandmeier and Joerg Franke, Friedrich-Alexander-University Erlangen-Nuremberg, Erlangen, Bavaria, Germany

# ID 077 Income inequality and human capital as factors influencing economic development of region – case study of Latvia

Liga Kamola, Uldis Kamols and Svetlana Ivanova, Riga Technical University, Riga, Latvia

#### 2:30 - 3:45, THURSDAY

# **Statistics and Optimization**

**Mayang Sari III** 

Session Chair: Albert Luguterah Uds, Navrongo, Upper East Region, Ghana

**ID 331** An Analysis on Process Parameters of Solder Jet Bonding to Increase the Shear Strength of Solder Joint in HGA Krisada Asawarungsaengkul and Jakawat Deeying, Department of Industrial Engineering, King Mongkut's University of Technology, North Bangkok, Bangkok, Thailand

ID 476 optimization of the acid catalyst concentration for synthesis of anti-cancer agent gamavuton-0 by using mathematical and statistical software

Sabtanti Harimurti, Hari Widada, Ismanurrahman Hadi and Didy Putra Wijaya, Universitas Muhammadiyah Yogyakarta, Daerah Istimewa Yogyakarta, Indonesia

ID 501 Aircraft Ground Movement Delay: A Descriptive Statistical Analysis at Kuala Lumpur International Airport Jafri Rohani, Mohd Izuddin Md Ithnan and Istas Fahrurrazi Nusyirwan, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia

ID 703 Selecting the Contractor using Multi Criteria Decision Making in National Gas Company of Lorestan province of Iran

Moslem Parsa, Industrial Engineering, Lorestan Gas Company, Khorramabad, Iran

ID 248 Yield Stability and Genotype by Environment Interaction of Fifteen Rice (Oryza Sativa L) Genotypes Evaluated under Rainfed and Irrigated Conditions in Northern Ghana

Albert Luguterah Uds, Navrongo, Upper East Region, Ghana Desmond S. Adogoba, CSIR - SARITamale, Northern Region, Ghana

### 2:30 - 3:45, THURSDAY

# **Modeling and Simulation**

**Mayang Sari IV** 

Session Chair: Rene Estember, Mapua Institute of Technology, Manila, Philippines

ID 155 Thermochemical Processing of Biomass: Graphic User Interface Models for Costing and Material Balances

Ali ElKamel, University of Waterloo, Waterloo, Ontario, Canada Rois Fatoni, Chemical Engineering Department, Universitas Muhammad

Rois Fatoni, Chemical Engineering Department, Universitas Muhammadiyah Surakarta, Surakarta Jawa Tengah, Indonesia Abdulhalim Abdulrazik, University of Waterloo, Waterloo, Ontario, Canada

ID 189 Empirical Analysis and Modeling of Learning Curves in the Apparel Manufacturing Industry

Thilini Ranasinghe, University of Peradeniya, Sri Lanka Chanaka Senanayake, University of Peradeniya, Sri Lanka Kanthi Perera, University of Peradeniya, Sri Lanka

### ID 669 Assembly Line Optimization using Arena Simulation

Abdul Talib Bon and Nur Nasihah Shahrin, Department of Production and Operations Management, Universiti Tun Hussein Onn Malaysia, Parit Raja, Johor, Malaysia

**ID 298** On the Energy detection of unknown signals over fading channel for different diversity combining techniques Rupali Agarwal, Neelam Srivastava and Himanshu Katiyar, Babu Banarasi Das National Institute of Technology and Management, Lucknow, Uttar Pradesh, India

## ID 192 Forecasting of Stock Prices Using Brownian Motion – Monte Carlo Simulation

Rene Estember, Mapua Institute of Technology, Manila, Philippines Michael John Maraña, Mapua Institute of Technology, Manila, Philippines

15:45 - Break

### 4:00 - 5:15, THURSDAY

## **Global Engineering Education XII**

Starhill 4

Session Chair: Nidhi M B, MarBaselios College of Engineering & Technology (MBCET), Thiruvananthapuram, Kerala, India

4:00 - 4:30 (Thursday)

Nidhi M B

HoD Mechanical Engineering Department

MarBaselios College of Engineering & Technology (MBCET)

Thiruvananthapuram, Kerala, India National Executive Council Member ISTE

Enhancing outcome Based Education through Self awareness

4:30 - 5:00 (Thursday)

Dr. P. Muredzi

Dean - School of Engineering & Technology

Harare Institute of Technology

Zimbabwe

5:00 - 5:30 (Thursday)

OPEN

### 4:00 - 5:15, THURSDAY

# **Industry Solutions XII**

Starhill 5

4:00 - 4:30 (Thursday)

OPEN

4:30 - 5:00 (Thursday)

OPEN

5:00 - 5:30 (Thursday)

OPEN

### 4:00 - 5:15, THURSDAY

# **Smart Manufacturing Workshop**

Starhill 6

## Dr. Rupy Sawhney

Heath Fellow in Business and Engineering Professor, Industrial and Systems Engineering University of Tennessee, Knoxville, USA

### 4:00 - 5:15, THURSDAY

# **Operations Excellence**

Starhill 7

Session Chair: Rajendra K. Patil, TSSM's Padmabhooshan Vasantdada Patil Institute of Technology, Bavdhan, Pune, India

**ID 693** Green Supply Chain Management: Do They Improves Operational Efficiency and Operational Performance Raja Zuraidah Rasi, Md Fauzi Ahmad and Siti Sarah Omar, Department of Production and Operations Management, Universiti Tun Hussein Onn Malaysia

### ID 702 Investigating Software Detection Methods

Kiran Khatter, School of Engineering & Technology, Ansal University, Gurgaon, India Arvind Kalia, Department of Computer Science, Himachal Pradesh University, Shimla, India

## ID 709 Design of a Crushing and Propagation Screw Mechanism for Progressive Pelletising in Food Waste

R. Masike, W. Mutenhabundo and R. Muchadenyika, Harare Institute of Technology, Box 277, Ganges Road, Belvedere Harare, Zimbabwe

# ID 716 A relationship framework and Critical application in between strategy and operational plans for manufacturing industry

John M. Ikome, Department of Industrial Engineering, Faculty of Engineering, Tshwane University of Technology, Pretoria, South Africa

Martha M. Ikome, Technology Transfers and Innovation (TTI), Vaal University of Technology, Vanderbijlpark, South Africa.

## ID 675 Design and Development of Drilling Jig for Spinning Rings used in Textile Industry

Rajendra K. Patil, Shivam C. Shinde, Suraj Madhukar Takale and Bhawarlal Choudhary, Dept. of Mechanical Engineering, TSSM's Padmabhooshan Vasantdada Patil Institute of Technology, Bavdhan, Pune, India

4:00 - 8:00, THURSDAY

## **Entreprenuership Workshop**

Starhill 8

### **Professor Donald M. Reimer**

Director of Entrepreneurial Programs College of Engineering Lawrence Technological University Southfield, Michigan, USA

**Case Studies** 4:00 - 5:15. THURSDAY

**Bintang V** 

Session Chair: Tan Chan Sin, University Malaysia Perlis

#### ID 252 Setup Time Reduction Using SMED in a Manufacturing Industry: A Case Study

Rajdeep Singh, Department of Mechanical Engineering, CGC College of Engineering, Landran, Mohali, Punjab, India Upender Dhull, Mechanical Engineering, National Institute of Technology, Kurukshetra, Haryana, India

## ID 682 Occupational Health & Safety Issues Affecting Worker Performance in Omani Industries

Mohammad Khadem, Department of Mechanical and Industrial Engineering, Sultan Qaboos University, Muscat, Oman

### ID 622 Creating shared value in South Africa. A case study of Rustenburg and Emahlahleni regions

Charles Mbohwa university of Johannesburg, South Africa

Tatenda Talent Chingono, University of Johannesburg, South Africa

### ID 661 Diverse Possibility of Fit Manufacturing Principle into Value Stream Mapping (VSM) and Its Impact: A Review Tan Chan Sin, Gwee Wan Theng, Rosmaini Ahmad, Hussain. M.I., and C.C. Lee, School of Manufacturing Engineering, University Malaysia Perlis, Kampus Tetap Pauh Putra, Malaysia

4:00 – 5:15, THURSDAY	OPEN	Bintang VI	
4:00 – 5:15, THURSDAY	OPEN	Bintang V	
	IFFC Marting Provided Directors		
4:00 – 5:15, THURSDAY	IFEES Meeting – Board of Directors	Mayang Sari I	
International Federation of Engineering Education Societies (IFEES) Meeting Board of Directors			
4:00 – 5:15, THURSDAY	IEOM Student Chapter Development Meeting	Mayang Sari II	
4:00 – 5:15, THURSDAY	IEOM Chapter Meeting	Mayang Sari III	
4:00 – 5:15, THURSDAY	IEOM Chapter Meeting	Mayang Sari IV	

5:30 pm, Thursday: Closing Mixer



### ID 006 Industrial Data Communication- PLC and External Application

Tanoy Kumar Paul and Manoj B., Siemens, Bangalore, India

### ID 007 Measurement and Prediction of Condensate Gas Hydrates Formation Conditions – A Study Case

Mimoun Hadj, Laboratory of Hydrocarbons technology, Dept. of Chemistry, Faculty of Hydrocarbons & Chemistry, University Mhamed Bouguerra of Boumerdes, Algeria.

Samer Said, Laboratory of Materials Science (LCMVAR), Dept. of Chemistry, Faculty of Science, University Hadj Lakhdar of Batna, Algeria

Otmanine Ghazi, Laboratory of Hydrocarbons Technology, Dpt of Chemistry, Faculty of Hydrocarbons & Chemistry, University Mhamed Bouquerra of Boumerdes, Algeria

Belloum Mohamed, Laboratory of Materials Science (LCMVAR), Dept. of Chemistry, Faculty of Science, University Hadj Lakhdar of Batna,, Algeria

# ID 036 Microstructural and Electrical properties of Screen-printed N+ Emitter of P-type Monocrystalline Silicon Solar cell

Chel-Jong Choi, Chonbuk National University, Jeonju-si, Jeollabuk-do, Korea

### ID 048 Debugging Operation of Automated Assembly Lne using Signal Noise Ratio

Masatoshi Kitaoka, Kanagawa University, Yokohama city, Japan Hitosh Takeda, Bunkyo University, Chiqasaki, Kanagawa, Japan

### ID 049 Model for Estimation of Interurban Passenger Transportation Scheme

Santiago-Omar Caballero-Morales, Universidad Popular Autónoma del Estado de Puebla, Puebla, Mexico Gladys Bonilla Enriquez, Universidad Popular Autonoma del Estado de Puebla, Puebla, Mexico

### ID 067 Your Opinion Matters: A Cross-Sectional Study on Happiness among Older Adults in Siberia

Ekaterina Taran, Galina Barysheva and Elena Frolova, Tomsk Polytechnic University, Tomsk, Russian Federation Fabio Casati and Giacomo Arrighini, The University of Trento, Italy

## ID 108 Integration of economic and environmental aspects in sustainable supply chain management: a review

Noraida Azura Darom and Hawa Hishamuddin, Universiti Kebangsaan Malaysia, Bandar Baru Bangi, Selangor, Malaysia

## ID 116 Characterization and Modeling of Rheological Behavior of a System of Mud a Reverse Emulsion

Mellak Abderrahmane, Boumerdes University – Algeria, Boumerdes, Algeria Kaddour El Heit, Université Mouloud Mammeri, Tizi Ouzou, Algeria

### ID 159 Optimization of a Battery Pack in Plug-In Hybrid Electric Vehicles

Ali ElKamel, University of Waterloo, Waterloo, Ontario, Canada

Rois Fatoni, Chemical Engineering Department, Universitas Muhammadiyah Surakarta, Jawa Tengah, Indonesia Manoj Mathew, Chemical Engineering Department, University of Waterloo, Waterloo, ON, Canada

# ID 166 Implementation of Knowledge Management at Woven Handycraft Industry (Case Study: DI Yogyakarta – Indonesia)

Nofi Erni, Esa Unggul University, Kebon Jeruk, West Jakarta, Indonesia

### ID 169 The Design of QTrac: An Automated Quality and Cost Management System for Projects

Hannelie Nel, Post-Graduate School of Engineering, University of Johannesburg, Johannesburg, Gauteng, South Africa

# ID 181 Investigation of structural and physical properties of Al1-xMnx thin films grown by magnetron sputtering: influence of thermal annealing

Majda Mokhtari, Badji Mokhtar-Annaba University, Sidi Amar, Annaba, Algeria

### ID 187 Study of surface quality - Effect of fractal dimension and texture parameters

Mounira Bourebia, Research center in Technologies Industrielles.CRTI.ex-CSC, Chéraga, Algéria, Annaba, Algeria Lakhder Laouar, Badji M okhtar University BP12 -2300, Industrial Mechanics Laboratory Annaba, Algeria Hamid Hamadache, Annaba University, Algeria

## ID 188 Effect of inclination of the walls mold on the primary cooling during the continuous casting

Mounira Bourebia, Research center in Technologies Industrielles.CRTI.ex-CSC, Chéraga, Algéria Annaba Algeria Lakhder Laouar Badji M okhtar University BP12 -2300, Industrial Mechanics Laboratory Annaba, Algeria

# ID 206 Selection of Green suppliers based on GSCM practices: Using fuzzy MCDM approach in an Indian Electronics Company

Vijayakumar Manupati, Akshay Uppala, Rohit Sharma and Harshita Raj, VIT University, Vellore, Tamilnadu, India

### ID 207 A Social Network Based Optimisation Approach on Patient Admission Scheduling Problem

Vijayakumar Manupati, Venkat Anirudh Kodali, Shaik Shama Zabeen and Lakkimsetti Sai Prudhvi Siddhartha, VIT University, Vellore, TamilNadu, India

Manoj Kakarla, Vit University, Chittoor, Andhra Pradesh, India

### ID 208 Analyzing the Effect of Line-Cell Conversion on Manufacturing Systems

Vijayakumar Manupati and Chaitanya Gangal, Vit University, Vellore, Tamilnadu, India

### ID 209 An Integrated Multi-Echelon Stochastic Supply Chain Production-Distribution Model with Carbon Emissions

Rishabh Ranka, Biswajita Mohanty, Manidhar Darisi Venkata, Raj Kumar Singh, Pavan Kumar Kulkarni and Vijayakumar Manupati, School of Mechanical and Building Sciences, Vellore Institute of Technology, Vellore, Tamil Nadu, India

### ID 219 Effect of Wire Cutting Process on the Variables of Surface Roughness

Mustafa A. Rijab, Technical Institute of Baguba, Mechanical Department, Iraq

Ali I. Al-Mosawi, Free Consultation, Babylon, Hilla, Iraq

Muhannad A. Al-Najar, Asia Cell Company, Iraq

Shaymaa Abbas Abdulsada, University of Kufa, Collage of Engineering, Iraq

# ID 226 Search an electric prevention by controlling the resistive component of the isolation of an ungrounded low voltage electrical network

Abderrezak Hocine, University Badji Mokhtar, Sidi Amar, Annaba, Algeria

### ID 253 Project Management for New Sputtering System Development

Yao-Chin, Wang Blue Bee System Integration Ltd., Tainan, Taiwan

### ID 255 A Hybrid Genetic Algorithm for Solving Facility Location-Allocation Problem

Farzad Firouzi Jahantigh, Department of Industrial Engineering, University of Sistan and Baluchestan, Zahedan, Iran Behnam Malmir, Department of Industrial and Manufacturing Systems Engineering, Kansas State University, Manhattan, USA

### ID 260 Lean Supplier Selection: A Data Envelopment Analysis (DEA) Approach

Masoud Rahiminezhad Galankashi, Department of Material, Manufacturing and Industrial Engineering, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Johor, Malaysia

Muhammad Hisjam, Department of Industrial Engineering, Faculty of Engineering, Sebelas Maret University, Surakarta, Indonesia Syed Ahmad Helmi, Department of Material, Manufacturing and Industrial Engineering, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Johor, Malaysia

## ID 261 Applying 5S Method on Trims Store's Documentation System in an Apparel Industry

Ishat Islam, SQBL, Rangpur, Rangpur, Bangladesh

## ID 274 Agile Supplier Selection: A Fuzzy Analytic Hierarchy Process (FAHP) Approach

Masoud Rahiminezhad Galankashi, Mohammad Hisjam and Syed Ahmad Helmi, UTM, Skudai, Johor, Malaysia

## ID 276 Mix Maker Ants: Inspiration for Multiple Objective Optimization

Hassan Soltan, Mansoura University, Mansoura 35516 Egypt

Sherif Mostafa, University of South Australia, Adelaide, SA 5000 Australia

### ID 279 Project Investment Decision Considering Background Risks

Yao Zhang and Xin Guan, School of Business Administration, Northeastern University, Shenyang, China

### ID 282 Heat transfer through fire fighter's protective clothing exposed to thermal radiation.

Zaina Norhallis Zainol and Masine Md Tap, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia

## ID 293 Determination of Burn-in Period Based on Reliabality Target for Product Failure Time with Weibull Distribution

Innah Dominique Puertollano and Michelle Joy Macapuno, Mapua Institute of Technology, Manila, Philippines Ying Che Chien, Chung Yuan Christian University, Taiwan

## ID 316 Stochastic Dynamic Optimization of Engineering Processes

Fethi H. Bellamine, The National Institute of Applied Science and Technology in Tunis, Centre Urbain Nord, Tunis Cedex, Tunisia Muhamad Fariz Failaka and Ali Elkamel, Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario, Canada

### ID 341 Automatic Screening Unqualified Result in Emotional Quotient Test

Suwilai Areejit, Bangkok Thonburi University, Taweewatana, Bangkok, Thailand

### ID 364 An alternative approach to criticality analysis of industrial risks

Nouara Ouazraoui, University of Batna-Algeria, Batna, Algeria

### ID 378 Quantitative Optimization of Nurses in Emergency Department of Teaching Hospital: A case study

Ali Mouseli, Health Care Management, Research Center for Health Services Management, Institute of Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran

Mohammad Hosein Mehrolhasani, Research Center for Health Services Management, Institute of Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran, Mechanical and Industrial Engineering

Zahra Mastaneh, Department of Health Information Management and Technology, School of Paramedicine, Hormozgan University of Medical Sciences, Bandar-Abbas, Iran

Leila Vali, Environmental Health Engineering Research center, Kerman University of Medical Sciences, Kerman, Iran

### ID 380 Reduction of chatter vibrations by management of the cutting tool

Bourdim Abdelghfour, University of Tlemcen, Tlemcen, Algeria

Bourdim Mokhtar, University Center of Relizane, Tlemcen, Algeria

### ID 434 Identifying Factors Affecting Entrepreneurial Sustainable Development (Case Study: Knowledge-Based Start-Ups of Science and Technology Park of Tehran University)

Niloofar Tavakoly Nabavy, Babak Zia and Shiva Vosoughi, Tehran, Iran

# ID 446 Implementation in-situ auto polishing rate optimization for chemical mechanical planarization process in semiconductor fabrication industry

Mohamed Ariff Shri Abdul Aziz and Mohamad Zambri Mohd Darudin, Silterra Malaysia Sdn Bhd, Kulim, Kedah, Malaysia Samad Ramlan, Mohamed Ariff Shri Abdul Aziz and Mohamad Zambri Mohd Darudin, Silterra Malaysia Sdn. Bhd., Kulim Hi-Tech Park, Kulim, Kedah, Malaysia

Muhammad Hafidz Fazli Md Fauadi and Mohd Razali Muhamad, Faculty of Manufacturing Engineering, Universiti Teknikal Malaysia - Melaka, Malaysia

### ID 482 Using several intelligences for complex industrial process monitoring: detection and diagnosis

Hayet Mouss, Nafissa Rezki, Okba Kazar, Laid Kahloul and Djamil Rezki, Batna 2 University, Batna, Algeria

### ID 489 Assessment of Business Processes in Consolidated Patient Account Centers

Shaiju Eapen, Department of Veterans Affairs USA, Shelby Township, Michigan, United States

## ID 520 Optimal Pricing Strategy for Multi-generations Durable Products with a Trade-in Program

Hui-Chiung Lo, Tamkang University, New Taipei City, Taiwan

### ID 528 Analytical Study of Pecking Order Theory of Capital Stucture; Evidence from Malaysia

Hamed Emami, Project Management Office, ZKJ Co., Esfahan, Iran

Maryam Rahimi Tehrani, Finance Division, DejDis Sepahan, Esfahan, Iran

### ID 530 A study on the Profitability Analysis of Power Grid Corporation of India Ltd

Prabhneet Kaur Sethi, Department of Applied Mathematics, Amity University, Noida, Uttar Pradesh, India Surbhi Gupta, Amity University, Noida, Uttar Pradesh, India

Prabhneet Kaur Sethi, Amity University, Noida, Uttar Pradesh, India

Mohit Gupta, Power Grid Corporation of India Ltd., Delhi, India

### ID 562 Contour Approach for Analysis of Minimum Regions for the Economic Statistical Design of X-bar Control Charts

Abdur Rahim, University of New Brunswick, Fredericton, New Brunswick, Canada

Santiago-Omar Caballero-Morales, Universidad Popular Autónoma del Estado de Puebla, Puebla, Mexico

### ID 563 A Review of Models for Optimal Bio-products Syntheses from Oil Palm Empty Fruit Bunch (EFB)

Ali ElKamel, University of Waterloo, Ontario, Canada

Rois Fatoni, Chemical Engineering Department, Universitas Muhammadiyah Surakarta, Jawa Tengah, Indonesia Abdulhalim Abdulrazik and Mahyar Abolhallaj, University of Waterloo, ON, Canada

# ID 571 The Effects of Lean Production Tools and Techniques Implementation at Malaysian Manufacturing and Service Industries: A Case Study Review

Musli Mohammad, Badrul Omar, Mohd Shahir Yahya and Edly Ferdin Ramly, Universiti Tun Hussein Onn, Johor, Malaysia

### ID 574 Crystallization kinetics and thermal behaviors of nanoclay dispersed jute reinforced composite

Sazib Mollik, IIUM, Gombak, Selangor, Malaysia

# ID 575 Model of Logistics Management of the Supply Chain (LMSC) to Improve the Production Sector of Perishable Food Integrated by Small and Medium Enterprises in Mexico

Gladys Bonilla Enriquez, Universidad Popular Autonoma del Estado de Puebla, Mexico

Cano Olivos, Universidad Popular Autónoma de Estado de Puebla, Mexico

### ID 641 Alternative solution for the pipeline transport of viscous oil using the heaters in pumping stations.

Amar Benmounah and Ammar Chebouba, Department of Transport and Equipment of Hydrocarbons, Faculty of Hydrocarbons and Chemistry. UMBB, Boumerdes, Algeria

# ID 666: Desalination of Seawater Research Project on the Basis of the Positive Results of Water Treatment by Magnetic Field

Abderrahmane Bellaouar, Department of Process Engineering, Amar TelidjiUniversity of Laghouat, Laghouat, Algeria Farid Touiti, Research and Development Technologies Laboratory, Afro-Energy Corporation Ltd., Metlili, Algeria

### ID 674 Rework Reduction in KHS Machinery Pvt. Ltd.

Dharmil Bavishi, Juhi Gupta, Gaurav Banthia, Parul Maroo, and Richa Grover, Industrial Engineering, Pandit Deendayal Petroleum University

### ID 685 Need for Deployment of RFID Technology in Indian Hospitals

Parul Maroo, Industrial Engineering, Pandit Deendayal Petroleum University, Raisan, Gandhinagar, Gujarat, India

### ID 698 Predicting Seasonal Demand with Bayesian Generalized Linear Model

Mohammad Anwar Rahman, Manufacturing & Construction Management, Central Connecticut State University, New Britain, Connecticut. USA

Ahad Ali and Gomanth Duvvuru, Lawrence Technological University, Southfield, Michigan, USA

#### ID 699 Impacts of 5S Implementation

Richa Grover, Shailee Dalal and Aditya Singh, Industrial Engineering Department, Pandit Deendayal Petroleun University, India

# ID 701 Resource Management for Workflows in Cloud Computing Environment Based On Group Technology Approach

Saleh Shahdi-Pashaki, Department of Industrial Engineering, Shomal University, Amol, Iran

Ehsan Teymourian, School of Mechanical, Industrial, and Manufacturing Engineering, Oregon State University, Corvallis, USA Vahid Kayvanfar, Department of Industrial Engineering, Amirkabir University of Technology, Tehran, Iran Koorosh Mashhadi Alizadeh, Department of Industrial Engineering, Sadjad University of Technology, Mashhad, Iran

# ID 719 Mean-Variance Portfolio Optimization on Some Stocks by Using Non Constant Mean and Volatility Models Approaches

Endang Soeryana Hasbullah, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran Bandung - Indonesia

Nur Fadhlina bt Abdul Halim, School of Informatics and Applied Mathematics, Universiti Malaysia Terengganu, Malaysia F. Sukono, Endang Rusyaman and Sudradjat Supian, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Bandung – Indonesia

### ID 720 Applications De Bruijn Graphs of Hamiltonian and Eulerian Cycles to Fault Tolerant Networks

Mochamad Suyudi, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Bandung, Indonesia

Roslan Bin Hasni Abdullah, School of Informatics and Applied Mathematics, Universiti Malaysia Terengganu, Malaysia Sudrajat Supian and Asep Kuswandi Supriatna, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Bandung – Indonesia

### **ID 721 Model Predictive Control for Automobiles**

Yash Deepak Gandhi and Maheep Singh Rathore, Pandit Dendayal Petroleum University, Ahmedabad, Gujrat, India

### ID 722 Quater Car Analysis Using Simulink

Yash Deepak Gandhi, Shailee Dalal and Anurag Nehra, Pandit Dendayal Petroleum University, Ahmedabad, Gujrat, India

## Senior Design Project / Final Year Project (FYP) Poster Presentation Competition

## ID 310 Optimization of Warehouse Operations for Logistics Company in the Philippines

Stephanie B. Duque, Maricar M. Navarro, Bernaliza O. Verrey, Jovale C. Vitao, Sherilyn M. Zantua and Rosalia F. Gabuya, Industrial Engineering Department, Technological Institute of the Philippines, Quezon City, Philippines

## ID 461 Investigation of Propagation and Permeability Modification of Grafted Bentonite Particles in Porous Media

Nurul Hanisah Alauddin, Nur Asyraf Md Akhir and Abdulazim Abass, Universiti Teknologi Petronas, Bandar Seri Iskandar, Perak, Malaysia

### ID 604 Prioritization of patients with Communication Disorders

Daoud Ait Kadi, Samira Abbasgholizadeh Rahimi and Angel Ruiz, Université Laval, Quebec, QC, Canada

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