## Sponsors

<table>
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<tr>
<th>Sponsor</th>
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<tbody>
<tr>
<td>ASQ Greater Detroit Section</td>
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<td>elringklinger</td>
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<td>ESD - The Engineering Society of Detroit</td>
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<td>IEEE Southeastern Michigan</td>
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<td>IFES - International Federation of Engineering Education Societies</td>
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<td>Michigan Simulation User Group</td>
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<td>SCQE - Society of Cost and Quality Engineers</td>
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<tr>
<td>Siemens</td>
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<td>Wayne State College of Engineering</td>
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<td>AMIE</td>
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## Organizer

**IEOM Society**

“Achieving and Sustaining Operational Excellence”

[www.ieomociety.org](http://www.ieomociety.org)
Welcome to the 2016 IEOM Detroit Conference

To All Conference Attendees:

We would like to welcome you to the International Conference on Industrial Engineering and Operations Management (IEOM) in Detroit, Michigan. This international conference provides a forum for academics, researchers and practitioners from many industries to exchange ideas and share recent developments in the field of Industrial Engineering and Operations Management. The theme of the conference is “Achieving and Sustaining Excellence in Quality, Reliability, Service and Operations.”

The challenge of continuous improvement will be significant in the 21st century and the 2016 IEOM Detroit Conference will address the issue of continuous improvement for quality and service. Perhaps the most important example of this issue is the current financial crisis facing the world. This crisis represents extraordinary challenges; however, it also represents significant opportunities for future industrial growth and new directions. Your IEOM Society has selected the following keynote speakers to address these issues:

- Mr. Carlo Materazzo, Head of World Class Manufacturing (WCM), FCA – Global, Fiat Chrysler Automobiles (FCA)
- Dr. Helmut Ludwig, Executive VP, Digital Enterprise Realization & Chief Manufacturing Officer, SIEMENS PLM Software, Plano, Texas, USA
- Mr. Kevin Poet, Head of Plant Operations, Siemens Charlotte Energy Hub, North Carolina, USA
- Dr. Jeffrey Abell, GM Technical Fellow, Lab Group Manager, Manufacturing Systems Research, General Motors Global Research and Development, Warren, Michigan
- Dr. Srinivas Garimella, Leader - Additive Manufacturing Center of Excellence, Eaton, Southfield, Michigan
- Mr. John Fleming, Executive VP Manufacturing & Labor Affairs (retired), Ford Motor Company
- Award Keynote: Hulas King, Director, Diversity, Professional Affiliations & Global Community Relations, Siemens PLM, St. Louis, Missouri, USA
- Dr. Charles Mbohwa, Professor and Vice-Dean Postgraduate Studies, Research and Innovation Faculty of Engineering and the Built Environment (FEBE), University of Johannesburg, South Africa
- Richard D. Shainin, Executive Vice President, Shainin, The Red X Company, Washington, D.C., USA
- Jd Marhevko, Vice President of Quality, Lean and EHS Systems, Accuride Corporation
- Dr. Kai Yang, Professor, Dept. of Industrial and Systems Eng. and Director, Healthcare Systems Eng. Group, Wayne State University, Detroit
- Prabhu Patil, President & CEO, Prolim Corporation, Dallas/Fort Worth, Texas
- Steven Sibrel, Senior Supplier Quality Manager, Harman International, Novi, Michigan, USA and Chair - ASQ Greater Detroit

The Industry Solutions Track will address industry needs to survive in a highly competitive international environment. Distinguished practitioners will share their many years of experience in successfully addressing and solving industrial challenges. They will focus on opportunities for continuous improvement and sustainability. GD&T, Lean Six Sigma, CAE with Hypermesh, Monte Carlo Simulation & Optimization and Entrepreneurship workshops have been scheduled. The GD&T workshop has 9 industry speakers who will share their extensive knowledge and experience.

At previous IEOM Conferences, the Global Engineering Education Series has been well received by attendees; therefore, the IEOM 2016 Detroit Conference will have a dedicated session on Global Engineering Education. Several distinguished speakers will discuss the readiness of engineering graduates to meet the workforce requirements now and in the future. Featured speakers will represent various countries around the globe. They will address the challenges and opportunities of engineering education.

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

We would also like to thank all of the attendees who are participating in this event. Your Conference Planning Committee welcomes you to Detroit and wishes you an enjoyable learning experience at the conference and a memorable adventure exploring USA with its many outstanding attractions including The Henry Ford: Ford Rouge Factory, Henry Ford Museum and Greenfield Village.

Enjoy the conference and the Michigan/USA experience.

Ahad Ali
Conference Co-Chair
Lawrence Technological University, USA

Steven Sibrel
Conference Co-Chair
Harman International and Chair, ASQ Greater Detroit

“Achieving and Sustaining Operational Excellence”
## IEOM Women in Industry and Academia Forum

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
<th>Institution/University</th>
<th>Country</th>
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<tbody>
<tr>
<td>Ms. Resh Plaha</td>
<td>Chair</td>
<td>Crystal Quality, UK</td>
<td>UK</td>
</tr>
<tr>
<td>Aamenah Bashir</td>
<td>BSc. Computer Engineering, MSc. Engineering Systems Management, ITIL Certified IT Specialist</td>
<td>Office of Academic Computing</td>
<td>United Arab Emirates (UAE)</td>
</tr>
<tr>
<td>Dr. Chan Chee-Ming</td>
<td>Associate Professor and Deputy Dean (Academic and Research)</td>
<td>Universiti Tun Hussein Onn</td>
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<tr>
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<td>Faulty of Engineering &amp; Management Science</td>
<td>Al Akhawayn University</td>
<td>Morocco</td>
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<tr>
<td>Dr. Rashmi Jha</td>
<td>Associate Professor and Program Coordinator of Master of Computer Applications</td>
<td>Gitarattan International Business School</td>
<td>India</td>
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<tr>
<td>Dr. Adriyah Shuib</td>
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<td>Associate Professor in Product Design</td>
<td>Loughborough University</td>
<td>United Kingdom</td>
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</tbody>
</table>
Overall Conference Program

September 22, 2016 (Thursday)
2:00 pm – 7:00 pm Registration – A210 (Architecture Building)
9:00 am – 4:00 pm Tour – The Henry Ford (Rouge Ford Factory, Henry Ford Museum and Greenfield Village)

September 23, 2016 (Friday)
7:00 am – 5:00 pm Registration – A210 (Architecture Building)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>7:00 am</td>
<td>Breakfast A210 (Architecture Building)</td>
</tr>
<tr>
<td>8:00 am</td>
<td>Workshop on “Monte Carlo Simulation &amp; Optimization”</td>
</tr>
<tr>
<td>8:00 am</td>
<td>Workshop on “Geometric Dimensioning and Tolerancing (GD&amp;T)” – Lear Auditorium, T429 - Architectural Bldg.</td>
</tr>
<tr>
<td>8:00 am</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
</tr>
<tr>
<td>9:15 am</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>9:30 am</td>
<td>WELCOME ADDRESS - Dr. Virinder Mouglil (President of Lawrence Technological University) – A200</td>
</tr>
<tr>
<td>10:00 am</td>
<td>OPENING KEYNOTE - Carlo Materazzo (Fiat Chrysler Automobiles) – A200</td>
</tr>
<tr>
<td>11:15 am</td>
<td>KEYNOTE: Dr. Charles Mbohwa (University of Johannesburg, South Africa) – A200</td>
</tr>
<tr>
<td>12:00 pm</td>
<td>KEYNOTE: Mr. Kevin Poet (Ford Motor Company) – A200</td>
</tr>
<tr>
<td>12:45 pm– 1:00 pm</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>1:00 pm– 2:00 pm</td>
<td>LUNCH KEYNOTE: Dr. Jeffrey Abell (General Motors Company) - Lunch Provided – A200</td>
</tr>
<tr>
<td>2:00 pm– 3:00 pm</td>
<td>Networking Break at Exhibition Area – A210</td>
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<tr>
<td>2:30 pm– 3:45 pm</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
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<tr>
<td>3:45 pm– 4:00 pm</td>
<td>Networking Break at Exhibition Area – 2nd Floor of Engineering Building</td>
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<tr>
<td>4:00 pm</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
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<tr>
<td>5:15 pm</td>
<td>Poster Display – A210</td>
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<tr>
<td>7:00 pm</td>
<td>Detroit River Walk (Windsor Canada International Border) and Other Sight Seeing – On Your Own</td>
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September 24, 2016 (Saturday)
7:00 am – 5:00 pm Registration – A210 (Architecture Building)

<table>
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<th>Time</th>
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<tr>
<td>7:00 am</td>
<td>Breakfast A210 (Architecture Building)</td>
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<tr>
<td>8:00 am</td>
<td>Workshop on “CAE with Hypermesh”</td>
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<tr>
<td>8:00 am</td>
<td>Workshop on “Lean Six Sigma Green Belt Certification”</td>
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<tr>
<td>8:00 am</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
</tr>
<tr>
<td>9:15 am</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>9:30 am</td>
<td>KEYNOTE - Aaron Rubel (AIRBUS Americas Engineering, Inc.) – A200</td>
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<tr>
<td>10:15 am</td>
<td>KEYNOTE - Dr. Srinivas Garimella (Eaton Corporation) – A200</td>
</tr>
<tr>
<td>11:00 am– 11:30 pm</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>11:30 am</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
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<tr>
<td>12:45 pm– 1:00 pm</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>1:00 pm– 2:00 pm</td>
<td>LUNCH KEYNOTE: John Fleming, Executive VP Manufacturing &amp; Labor Affairs (retired), Ford Motor Company – A200</td>
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<tr>
<td>2:00 pm– 3:00 pm</td>
<td>Networking Break at Exhibition Area – A210</td>
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<tr>
<td>2:30 pm– 3:45 pm</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
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<tr>
<td>3:45 pm– 4:00 pm</td>
<td>Networking Break at Exhibition Area – 2nd Floor of Engineering Building</td>
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<tr>
<td>4:00 pm</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
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<tr>
<td>7:00 pm– 10:00 pm</td>
<td>CONFERENCE AWARD DINNER – Don Ridler Field House, Lawrence Tech Campus (Near Civic Drive)</td>
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<td>AWARD KEYNOTE: Hulas King (Siemens PLM Software)</td>
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September 25, 2016 (Sunday)
7:00 am – 1:00 pm Registration – A210 (Architecture Building)

<table>
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<tr>
<th>Time</th>
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<tr>
<td>7:00 am</td>
<td>Breakfast A210 (Architecture Building)</td>
</tr>
<tr>
<td>8:00 am</td>
<td>Workshop on “Lean Six Sigma Green Belt Certification”</td>
</tr>
<tr>
<td>8:00 am</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
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<tr>
<td>9:15 am</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>9:30 am</td>
<td>KEYNOTE: Dr. Helmuth Ludwig (Siemens PLM Software) – A200</td>
</tr>
<tr>
<td>10:15 am</td>
<td>KEYNOTE - Richard D. Shainin (Shainin, The Red X Company) – A200</td>
</tr>
<tr>
<td>11:00 am- 11:15 pm</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>11:15 am</td>
<td>KEYNOTE - Jd Marhevko (Accuride Corporation) – A200</td>
</tr>
<tr>
<td>11:45 am</td>
<td>KEYNOTE: Dr. Kai Yang (Wayne State University) – A200</td>
</tr>
<tr>
<td>12:15 pm</td>
<td>KEYNOTE: PrabhjPatil (Prolim Corporation) – A200</td>
</tr>
<tr>
<td>12:45 pm– 1:00 pm</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>1:00 pm– 2:00 pm</td>
<td>LUNCH KEYNOTE: Steven Sibrel (Harman International) - Lunch Provided – A200</td>
</tr>
<tr>
<td>2:00 pm– 2:30 pm</td>
<td>Networking Break at Exhibition Area – A210</td>
</tr>
<tr>
<td>2:30 pm– 3:45 pm</td>
<td>Workshop on “Entrepreneurship”</td>
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<tr>
<td>3:45 pm– 4:00 pm</td>
<td>Networking Break at Exhibition Area – 2nd Floor of Engineering Building</td>
</tr>
<tr>
<td>4:00 pm– 5:15 pm</td>
<td>Parallel Sessions – 2nd Floor of Engineering Building (E200 – E209)</td>
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</table>
# Program Matrix

## Friday, September 23, 2016

<table>
<thead>
<tr>
<th>Time</th>
<th>Room E200</th>
<th>E201</th>
<th>E202</th>
<th>E203</th>
<th>E204</th>
<th>E205</th>
<th>T429</th>
<th>E207</th>
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</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Global Engineering Education</td>
<td>Industry Solutions</td>
<td>Quality</td>
<td>Undergraduate Student Paper Competition</td>
<td>Doctoral Dissertation Competition</td>
<td>Graduate Student Paper Competition</td>
<td>GD&amp;T Workshop</td>
<td>Monte Carlo Simulation Workshop</td>
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<td>Networking Break at Exhibition Hall - A210</td>
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<tr>
<td>09:30</td>
<td>Welcome Address: Dr. Vininder K. Moudgil, President of Lawrence Technological University – A200</td>
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<tr>
<td>10:00</td>
<td>Opening Keynote: Carlo Matarazzo, Head of World Class Manufacturing (WCM), FCA – Global, Fiat Chrysler Automobiles (FCA), Auburn Hills, Michigan – A200</td>
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<tr>
<td>11:15</td>
<td>Keynote: Dr. Charles Mbohwa, Professor and Vice-Dean Postgraduate Studies, Research and Innovation Faculty of Engineering and Built Environment, University of Johannesburg, South Africa</td>
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<tr>
<td>12:00</td>
<td>Keynote: Mr. Kevin Poet, Plant Manager, Rawsonville Component Plant, Ford Motor Company</td>
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<tr>
<td>1:00</td>
<td>Lunch Keynote: Dr. Jeffrey Abell, GM Technical Fellow, Lab Group Manager, Manufacturing Systems Research, General Motors Global Research and Development, Warren, Michigan (Lunch Provided) - A200</td>
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## Saturday, September 24, 2016

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<td>08:00</td>
<td>Global Engineering Education</td>
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<td>Manufacturing and Design</td>
<td>GD&amp;T Workshop</td>
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<td>Engineering Education</td>
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<td>09:30</td>
<td>Keynote: Aaron Rubel, Engineering Lead - Cabin &amp; Cargo Standard Parts, Flammability Certification, &amp; Mass Properties, Certified Lean Six Sigma Black Belt, AIRBUS Americas Engineering, Inc. - A200</td>
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<td>Keynote Dr. Srinivas Garimella, Leader - Additive Manufacturing Center of Excellence, Eaton Corporation – A200</td>
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<td>Lunch Keynote: John Fleming, Executive VP Manufacturing &amp; Labor Affairs (retired), Ford Motor Company - A200</td>
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<td>3:45</td>
<td>Global Engineering Education</td>
<td>Industry Solutions</td>
<td>Sustainable Manufacturing</td>
<td>Project Management</td>
<td>Supply Chain Management</td>
<td>Data Analytics</td>
<td>GD&amp;T Workshop</td>
<td>Monte Carlo Simulation Workshop</td>
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<td>4:00</td>
<td>Global Engineering Education</td>
<td>Industry Solutions</td>
<td>Manufacturing and Reliability</td>
<td>Production Planning and Management</td>
<td>Inventory Management</td>
<td>Entrepreneurship and Innovation</td>
<td>GD&amp;T Workshop</td>
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<td>7:00</td>
<td>Award and Recognition Dinner – Don Ridler Field House, LTU Campus</td>
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<td>Award Keynote: Hulas King, Director, Diversity, Professional Affiliations &amp; Global Community Relations, Siemens PLM Software</td>
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## Sunday, September 25, 2016

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<td>Operations Research</td>
<td>Case Studies</td>
<td>Human Factors &amp; Ergonomics</td>
<td>Lean Six Sigma Workshop</td>
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<td>Keynote: Dr. Helmut Ludwig, Executive VP, Digital Enterprise Realization &amp; Chief Manufacturing Officer, Siemens PLM</td>
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<td>Keynote: Jd Marhevko, Vice President of Quality, Lean and EHS Systems, Accuride Corporation</td>
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<td>11:45</td>
<td>Keynote: Dr. Kai Yang, Professor, Dept. of Industrial and Systems Engineering, Wayne State University, Detroit</td>
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<td>12:15</td>
<td>Keynote: Prabhu Patil, President &amp; CEO, Prolim Corporation, Dallas/Fort Worth, Texas</td>
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<td>1:00</td>
<td>Lunch Keynote Steven Sibrel, Sr. Supplier Quality Manager, Harman International and Chair – ASQ Detroit (Lunch Provided)</td>
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<td>Entrepreneurship workshop</td>
<td>Lean Six Sigma Workshop</td>
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© IEOM Society International
Keynote Speakers

9:30 am – Welcome Address
Dr. Virinder K. Moudgil  
President  
Lawrence Technological University  
Southfield, Michigan

10:00 am – 10:50 am (Friday, September 23) – Opening Keynote
Carlo Materazzo  
Head of World Class Manufacturing (WCM), FCA – Global  
Fiat Chrysler Automobiles (FCA)  
Auburn Hills, Michigan

Carlo Materazzo was appointed Head of World Class Manufacturing (WCM), FCA – Global, in October 2015. In this position, Materazzo will be responsible for the WCM audit process, knowledge sharing, implementation and coordination between the four regions – EMEA, APAC, LATAM and North America. This assignment is in addition to his current responsibilities for WCM expansion at the Company's 37 manufacturing facilities in North America. WCM is a methodology that focuses on eliminating waste, increasing productivity, and improving quality and safety in a systematic and organized way. WCM engages the workforce to provide and implement suggestions on how to improve their jobs and their plants.

Before coming to the U.S., Materazzo was the plant manager at Fiat's Giambattista Vico Plant in Pomigliano, Italy, which was awarded Gold status in WCM in June 2013. In his role, Materazzo was responsible for all day-to-day operations, including meeting quality standards; ensuring compliance with health, safety and environmental regulations; and achieving production targets for the Fiat Panda. Materazzo joined Iveco S.p.A. in Turin, Italy, in 1996, working in the axle plant. He has held various positions of increasing responsibility in manufacturing and has been certified as a WCM auditor.

His work and academic background includes:
- October 2015 – current, Head of World Class Manufacturing, FCA – Global
- March 2015 – current, Head of World Class Manufacturing, FCA – North America
- 2013, Plant Manager, Giambattista Vico Plant, Pomigliano, Italy, Fiat S.p.A.
- 2009, Plant Manager, Atessa, Italy, Sevel S.p.A.
- 2007, Plant Manager, Valladolid, Spain, Iveco Espana S.L.
- 2005, Russia Project Manager and Lean Manufacturing Project Manager, Suzzara Plant, Suzzara, Italy, Iveco S.p.A.
- 2003, Change Agent – Lean Manufacturing, Turin, Italy
- 2000, Operational Unit Manager
- 1999, Field Engineer – CPE
- 1997, Integrated Group Head
- 1997, Manufacturing Engineering Specialist, Iveco Axle Plant

Materazzo earned a Master of Mechanical Engineering from La Sapienza in Rome, Italy (1996). He was born in Spoleto, Italy.

11:15 am – 12:00 pm (Friday, September 23) – Keynote
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.

12:00 pm – 12:45 pm (Friday, September 23) – Keynote

Kevin Poet
Head of Plant Operations
Siemens Charlotte Energy Hub
North Carolina, USA

Kevin Poet is the Head of Plant Operations for the Siemens Charlotte Energy Hub in Charlotte, NC, a position he assumed in May 2016. The Siemens Charlotte Energy Hub is the company’s global location for 60Hz fossil power generation equipment manufacturing and service, with additional capabilities for the 50Hz market.

Mr. Poet is responsible for the day-to-day operations of the Charlotte facility, with a strong focus on safety, quality, on-time delivery and cost metrics. In addition, his role focuses on providing strong customer support for the factory and its three product lines: Large Gas Turbines, Steam Turbines and Generators.

Prior to his most recent position, Mr. Poet was the Plant Manager for the Rawsonville, MI Components Plant for the Ford Motor Company. For more than 26 years, Mr. Poet spent his career in roles of increasing responsibility, supporting varying divisions and product lines for the Ford Motor Company.

Mr. Poet has been a member of the Society of Automotive Engineers for more than 25 years, a Senior Member of the Institute of Industrial Engineers for 15 years, and is a Six Sigma Green Belt and Project Champion.

Mr. Poet holds a Bachelor of Science Degree in Industrial Engineering from Wayne State University and a MBA from the University of Michigan.

1:00 pm – 2:00 pm (Friday, September 23) – Lunch Keynote

Jeffrey Abell, PhD, FSME, PE
GM Technical Fellow
Lab Group Manager
Manufacturing Systems Research
General Motors Global Research and Development
Warren, Michigan

Next Generation Quality Management Systems

Jeffrey Abell is GM technical fellow and lab group manager, Manufacturing Systems Research Lab, General Motors Global Research and Development. He is responsible for all battery manufacturing research in the company, and his team was key to bringing the Chevy Volt advanced, high-power battery to production. Abell was awarded the 2011 General Motors Boss Kettering Award for outstanding technical innovation in battery manufacturing, and the 2014 Boss Kettering Award for work related to automotive application of elastic averaging.

Previous assignments include robust synthesis and optimization; global engineering integration (GM Europe); vehicle development process engineering; robotics simulation (DaimlerChrysler); and advanced manufacturing development (Delphi Automotive Systems). He has a bachelor’s degree in mechanical engineering from General Motors Institute (now Kettering University), and graduate degrees in systems engineering from Oakland University. Abell is an SME Fellow, a member of the Engineering Accreditation Commission of ABET, chair of SME’s Accreditation Committee and member of SAE’s ABET Committee. He has written numerous technical papers for conferences and journals. Abell is a licensed professional engineer in the state of Michigan.

9:30 am – Saturday Morning Keynote

Aaron Rubel
Engineering Lead
Cabin & Cargo Standard Parts, Flammability Certification & Mass Properties
Certified Lean Six Sigma Black Belt
AIRBUS Americas Engineering Inc.

Aaron Rubel is the engineering supervisor for functions of global Cabin & Cargo Standard Parts, Mobile, Alabama site Flammability Certification and Mass Properties teams within the engineering cabin perimeter at Airbus. He is a certified and practicing Lean Six Sigma Black Belt, and additionally serves as site intellectual property liaison.

Prior to 2009, Mr. Rubel served 20 years in the automotive industry. He was lead engineer of the 2007 Chrysler Sebring rear seat program at Faurecia Automotive Seating, contributed to body design on the Dodge Dakota and Durango vehicles at Chrysler Corporation, and spent several years gaining manufacturing experience in production and prototype facilities.
He has received awards in both the aerospace and automotive industries for driving process improvements, cost savings, innovating methods, and mentorship. Mr. Rubel has earned two patents in the automotive industry and has one currently pending within aerospace. Aaron was honored with induction into the Lawrence Technological University College of Engineering Hall of Fame.

Rubel is a master's candidate at the University of Tennessee at Chattanooga within the M.S. in Engineering Management degree program and earned his Bachelor of Science in Engineering Technology at Lawrence Tech University.

He also has made significant contributions to the community in areas of education and watershed conservation. He serves as vice-chair on the board of directors for the Bayshore Christian School in Fairhope, Alabama, and chairs the strategic planning committee of the school board. He also contributed to the development of a Mobile, Alabama, Anea Education Foundation strategic plan for science, technology, engineering, and mathematics (STEM) that was published in 2015. Rubel is a former state membership committee chair in the Michigan Trout Unlimited conservation organization and has authored articles on watershed conservation and fly fishing that have been published in nationally distributed periodicals.

Married with two children, Mr. Rubel lives in the Mobile, Alabama area.

10:15 am – Saturday Morning Keynote

Dr. Srinivas Garimella
Leader - Additive Manufacturing Center of Excellence
Eaton Corporation
Southfield, Michigan

Srinivas Garimella directs the strategy and operation of Eaton’s Additive Manufacturing Center of Excellence. He joined Eaton in September 2013 in the Manufacturing and Supply Chain team in Electrical Sector to lead initiatives in global manufacturing strategies and innovation.

Prior to Eaton, Srinivas worked for Alcoa and Deloitte Consulting. At Alcoa, he led programs to align innovation strategy to business strategy, structure robust early stage innovation processes, deliver breakthrough technologies in energy efficiency, drive collaborative new product/process development with external entities as part of Alcoa’s Open Innovation initiative, and develop/deploy control and automation technologies to improve productivity and product quality in Alcoa’s facilities world-wide. At Deloitte, he led a variety of engagements in manufacturing/supply chain strategy, operations transformation, inventory reduction, lean manufacturing, merger integration planning, ERP system planning, and infrastructure risk assessment.

Srinivas earned a Ph.D. in Mechanical Engineering from Ohio State and an MBA from Carnegie Mellon’s Tepper School of Business. He received numerous awards for outstanding academic accomplishments.

1:00 pm, Saturday, September 24 – Lunch Keynote

Mr. John Fleming
Executive VP Manufacturing & Labor Affairs (retired)
Ford Motor Company

John retired from Ford Motor Company at the end of 2015 after 48 years with the Company. At the time of his retirement he was Executive Vice President of Global Manufacturing and Labor Affairs a role he held since 2008. Prior to the Manufacturing role he was the Chairman and CEO of Ford of Europe and Export Markets and Chairman of Volvo Cars. Prior to this time he spent his career in Various Manufacturing Roles Globally. Born in Liverpool England he joined Ford as an Engineering Apprentice in 1967. Mr. Fleming holds an Honorary Degree from the John Moores University in Liverpool and production engineering qualifications from North East London Polytechnic.

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 (IFiEES) 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

9:30 – 10:15 am Sunday Morning Keynote

Dr. Helmuth Ludwig
Executive Vice President - Digital Enterprise Realization and Chief Manufacturing Officer
SIEMENS PLM Software
Plano, Texas, USA

“The Digital Enterprise”

Dr. Helmuth Ludwig is executive vice president of Digital Enterprise Realization and chief manufacturing officer for Siemens PLM Software, a business unit of the Siemens Digital Factory Division. Dr. Ludwig has a long history of developing and leading highly successful organizations. He began his career at Siemens in 1990, working in Corporate Development to create regional strategies. He subsequently opened and built up the first Siemens organization in Kazakhstan, serving as general manager until 1996, when he joined Siemens’ Automation and Drives (A&D) group with responsibility for Process Instrumentation Systems. From 1998 until 2001 he was head of Siemens’ Energy and Industry division in Buenos Aires, then from 2001 to 2002 served as division president for Software and Systems House. In 2002 he moved to A&D’s Systems Engineering division as president. Dr. Ludwig served as president of Siemens PLM Software from 2007 until 2012, later taking on the role of CEO of the Industry Sector USA immediately prior to assuming his current position.

Dr. Ludwig holds a Master of Science degree in Industrial Engineering from the University of Karlsruhe, a Master of Business Administration from the University of Chicago and a PhD in Political Science from Christian-Albrechts-University in Kiel. He teaches as adjunct professor for International Corporate Strategy at SMU’s Cox School of Business in Dallas.

Committed to community service, he has served as president of the Spanish-German Executive Committee of Rotary International, was the founding president of the first Rotary Club in Central Asia and a member of the Board of Trustees for the Kazakhstan Institute of Management, Economics and Strategic Research (KIMEP) among numerous other activities.

Married with two children, Dr. Ludwig lives in the Dallas area.

10:15 – 11:00 am Sunday Morning Keynote

Richard D. Shainin
Executive Vice President
Shainin, The Red X Company
Whashington, D.C., USA

Richard is an author and lecturer. He wrote the “Multi-Vari Charts” chapter for the Encyclopedia of Statistics in Quality and Reliability (Wiley 2008). He has also published papers in Quality Engineering and Six Sigma Forum. He has been a frequent speaker at quality conferences including the ASQ World Conference. Dick was named the 2014 Quality Leader of the Year by the ASQ Automotive Division. His insights on quality, reliability and technical problem solving have been quoted by Bloomberg News, Automotive Engineering, The Detroit Free Press, The Detroit News and Automotive News. He has also been interviewed for radio and television. Prior to joining Shainin in 1991, Dick worked at AT&T where he led high-performance teams in engineering, operations, marketing and sales. He currently guides class development and delivery, and he continues to work with client leadership to develop and implement Shainin programs. Dick has a bachelor of engineering degree from Stevens Institute of Technology (Hoboken, NJ), and an MBA from American University (Washington, D.C.). He is a graduate of the AT&T Management Development Program.
**IEOM Detroit Conference**  
**Keynote Speakers**  
**September 23 - 25, 2016**

### 11:00 – 11:30 am Sunday Morning Keynote

**Jd Marhevko**  
VP QLMS & EHS  
Accuride Corp

Jd Marhevko is the Vice President of Quality, Lean and EHS Systems for Accuride Corporation. She is a business and operational excellence executive with over 25 years of operations, QA and lean experience in a variety of industries including Automotive, Aerospace, Plastics and Machining. Jd is an ASQ Fellow, a Certified Manager of Quality and Organizational Excellence (CMQ/OE), a Certified Quality Engineer (CQE) and a Certified Six Sigma Blackbelt (CSSBB). She is also a trained Master Black Belt (MBB). Jd has been a senior Baldrige System assessor for the state of Michigan for several years. She holds a Bachelor of Science in Engineering (BSE) from Oakland University in Michigan and a Master’s of Science Administration (MSA) from Central Michigan University. Jd is a Past-Chair of ASQ’s Quality Management Division (QMD), a 24,000 member global professional organization.

### 11:30 am – 12:00 pm Sunday Keynote

**Dr. Kai Yang**  
Professor, Department of Industrial and Systems Engineering  
Director, Healthcare Systems Engineering Group  
Wayne State University, Detroit, Michigan

Biography: Dr. Kai Yang is a Professor of the Industrial and Systems Engineering Department at Wayne State University. Dr. Kai Yang has been the Director of the Healthcare Systems Engineering Group of Wayne State University since 2009. Dr. Yang’s areas of research include statistical methods in quality and reliability, healthcare system engineering, data analytics and applications, his research has been supported by NSF, the VA, Siemens, General Motors, Ford, Chrysler, and many others. He is the author of 8 books in 4 languages, and hundreds of publications. He speaks frequently in international conferences, and research seminars, and consults for industrial corporations. Dr. Yang serves important roles in American Society of Quality and Institute of Industrial and Systems Engineering (IISE), and serves various editorial roles for many journals, especially his leadership role in two flag journals of IISE.

Dr. Yang is one of the founding proposal writers and an academic faculty advisor of VA Center of Applied Systems Engineering (VA CASE), by far the largest national engineering resource center sponsored by the US Department of Veteran Affairs whose mission is to promote the use of industrial engineering to improve healthcare systems. Dr. Yang’s healthcare system engineering group works closely with VA CASE and Dr. Yang is the PI of 28 healthcare system engineering-sponsored projects. Dr. Yang has been a quality engineering coach to several famous international companies, including Apple Inc and Siemens Energy. Dr. Yang obtained both his MS and PhD degrees from the University of Michigan.

### 12:00 – 12:30 pm: Sunday Keynote

**Prabhu Patil**  
President & CEO  
Prolim Corporation  
Dallas/Fort Worth, Texas

Prabhu Patil has hands-on Technology and Management experience and proven record of developing technology solutions to address customer business problems to reduce time-to-market, cost and increase productivity. He comes with nearly two decade of diverse experience across Government, Private and Public Companies such as IBM, EDS and Siemens. As President of the company, he helps global companies to build strategies, innovative products, and set up and scale software centers / R&D centers / offshore development centers (ODC). Prabhu has been widely recognized with several awards in every company he worked for: Defense Outstanding Scientist (1994), Excellence Award (1996), Rookie of year (1997), MVP (1998), Product Manager Award (2000), EDS Achievement Award (2002), Outstanding Achievement Award (2005), Siemens Americas Consulting Award (2009). Specialties: Program Management, Product Management, Account/Contract Management, Building Offshore Centers, Overall General Management of IT Infrastructure/Software Business.

### 1:00 pm – Sunday Lunch Keynote

**Steven Sibrel**  
Senior Supplier Quality Manager  
Harman International, Novi, MI  
Chair - ASQ Greater Detroit

Steve Sibrel is a business process improvement trainer, coach and auditor with over 35 years of experience in the business and manufacturing world. He is currently working as Senior Supplier Quality Manager at Harman International, a manufacturer of audio and infotainment systems for consumer, professional, and automotive industries, with well-known brands such as JBL, Lexicon, Crown, Infinity, Mark Levinson, Becker and Harman-Kardon. Previously he held a number of engineering and management positions in diverse industries at Applied Materials (Semiconductor), NEC (Telecommunications) and Texas Instruments (Military). He has conducted over 200 supplier audits in North America, Europe, and Asia and is a Lead Auditor for ISO/TS16949, ISO9001, ISO13485, ISO17025, and 21CFR820. He has been the Chair for Professional Development for the ASQ Detroit section since 2008. He received the Distinguished Service Award in 2008 and the Leadership Award...
in 2013 from ASQ. Current ASQ Certifications held are Six Sigma Black Belt, Quality Engineer, Quality Inspector, Quality Auditor, and Manager of Quality/ Organizational Excellence. He is an adjunct facility member at Macomb Community College. Steve has a BSEE degree from Rose Hulman Institute of Technology and an MSEE degree from Southern Methodist University.

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September 23-25, 2016

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DISTINGUISHED SPEAKERS – Global Engineering Education

Friday (September 23, 2016)

Session I: Global Engineering Education
Room Engineering Building E200, 8:00 – 9:15 am (Friday)
Session Chair: Dr. Srikant Raghavan, Lawrence Technological University

8:00 – 8:25 (Friday)

Ms. Tengku Shahraniza Bt Tengku Abdul Jalal
Head of Intensive English Language Programme
Multimedia University, Malaysia

Workplace English: An Analysis of Communication Needs

Tengku Shahraniza graduated from University Kebangsaan Malaysia with a Bachelor of Education (Hons) in TESL and obtained her Master of Business Administration (MBA) from Multimedia University. She possesses more than 20 years of teaching and training experiences that include teaching preschool, primary school, and secondary school students. She designs syllabus, modules and teaching materials. At the same time, she develops, creates and moderates exam questions and assessment. She taught English courses and camps for foundation, pre-diploma and diploma in colleges, matriculation centre and universities like UiTM, UTM, UPM and MMU. Tengku Shahraniza has been teaching international students from Saudi Arabia, Yemen, Oman, Sudan, Nigeria, Botswana, Kazakhstan, Iran, Iraq, Tanzania, Japan, Korea and Thailand.

She is currently the lecturer and advisor for Arabic Culture Society at Multimedia University, Melaka. Her roles in Arabic Culture Society are to examine the important role religion and culture play among the Middle Eastern and how it could shape the Arab students' and other local students of their belief systems and their lifestyles. She exposed the Arab students to the local cultures through charity events and homestay programmes. She is also a trainer training Support Staff, Executives and Head of Departments for multinational companies and government agencies.


She loves doing research with special interest in ESP, Technical and Business Communication, Management and Aviation. She has been the judge for state and national challenges for the well known RHB NST SPELL IT RIGHT CHALLENGE for 7 years. This nationwide spelling competition jointly organised by the New Straits Times and RHB Banking Group as a corporate social responsibility exercise. It was started in 2008 with the objectives to foster English proficiency among young Malaysians and to promote the usage of the newspaper as an educational tool. The competition has received endorsement from the Ministry of Education since 2008. She also published papers in highly reputable peer-reviewed open-access international conferences and journals listed in Scopus, ISI and Copernicus.

8:25 – 8:50 (Friday)

Dr. Annamalai Pandian
Assistant Professor of Mechanical Engineering
Coordinator – Engineering Technology Management Program
Department of Mechanical Engineering
Science Engineering & Technology
Saginaw Valley State University
Saginaw, Michigan, USA

Dr. Annamalai Pandian is an assistant professor at Saginaw Valley State University. He earned his B.Eng. & M. Eng. Degree in Mech. Eng. from the University of Madras, Chennai, India, and M.S Degree in Mech. Eng. from Louisiana State University, Baton Rouge, LA, USA and D. Eng., Degree in Manufacturing Systems from Lawrence Technological University, Southfield, MI, USA. He has wide range of industrial experience in sheet metal stamping, robotic welding, automation, product design, project management, six sigma and lean manufacturing methods. He has very good certification knowledge on ISO 9001 standards and procedures. He taught in the University of Wisconsin-Stout for few years before moving to Saginaw Valley State University.

Dr. Pandian has worked in the Advanced Manufacturing Engineering division in Chrysler LLC, Auburn Hills, MI, USA for 13+ years. He has wealth of experience in automotive tooling design, process and manufacturing. He has taught several mechanical, design and manufacturing engineering courses including Engineering Mechanics, CAD, Jigs & Fixtures, Robotics & Machine Vision, Manufacturing Process Eng., Manufacturing Systems Design and Simulation, and Lean Manufacturing. Dr. Pandian's research interests include 3D printing, Sheet metal forming, Simulation, DOE, Robotics, ARMA and ANN. He is a member of ASQ, ASEE, IEOM, IIE, and SAE.
Grades, Assessment & Accreditation

Abstract: This presentation looks at the three common tools used in education in general and higher education in particular, and reflects on their purpose and the extent to which that purpose is achieved. Grades are typically used to assess the performance of individual students in a specific assignment or a course. Assessments are usually used to determine if a program of study is meeting the objectives/goals that it was designed for. Finally, accreditation is a tool to ensure Colleges, Institutes and Universities deliver quality education across all fields of study. Each of these tools is designed to assess how well academic programs are meeting their goals. As such, they play an important role in ensuring the quality of education. Because of their importance, and the dramatic changes in student demographics, challenges, and needs, advances in educational technology, and advances in knowledge itself, we must periodically examine our assessment tools to ensure they are aligned with, and are effectively promoting quality education. This presentation explores some possible improvements to our assessment tools.

Session II: Global Engineering Education
Room Engineering Building E200, 2:30 – 3:45 pm

Session Chair: Dr. Adedeji B. Badiru, Air Force Institute of Technology, Wright-Patterson, Dayton, Ohio

2:30 – 2:55 (Friday)

Dr. Srikant Raghavan
Associate Professor, College of Management
Lawrence Technological University
Southfield, Michigan, USA

Dr. Srikant Raghavan, currently an associate professor, has been part of the faculty in the College of Management since 1987. Before this position, Dr. Raghavan worked for General Motors as a Senior Research Engineer and Tata Consulting Services as an Associate Consultant. In addition, he has taught at half a dozen academic institutions as a part-time or full time faculty.

Dr. Raghavan holds a bachelor's in Physics from the University of Madras, a master's in Operational Research from the University of Delhi, a master's in Operations Research from Case Institute of Technology, and a doctorate in Business from the University of Houston. His research interests are primarily directed towards better teaching of the quantitative disciplines and issues in the application of Operations Management. In addition, he is interested in exploring the role and accountability of the Governance entities in business and academic institutions. Dr. Raghavan is included in the 23rd edition of “Who’s Who in the Midwest”, Published in Feb 1992.

He is active in a number of professional organizations like the American Production and Inventory Control Society (APICS), and the Sigma Xi Scientific Research Society. He is also a Professional Life member of the Operations Research Society of India (ORSI). He has revived local chapters of ORSI and INFORMS (The Institute for Operations Research and Management Science) in 1981 and 1985, respectively. Dr. Raghavan was naturalized as a U.S. Citizen in October 1992.

Adedeji B. Badiru, Ph.D., PE, PMP, FIIE
Dean, Graduate School of Engineering and Management
Professor of Systems Engineering
AFIT/EN, Air Force Institute of Technology
Wright-Patterson Air Force Base, Dayton, Ohio, USA

Adedeji Badiru is SES-Equivalent Dean of the Graduate School of Engineering and Management at the Air Force Institute of Technology (AFIT) at Wright Patterson Air Force Base, Dayton, Ohio. He was previously Professor and Head of Systems Engineering at AFIT. He was also previously Professor and Head of Industrial & Information Engineering at the University of Tennessee, Knoxville. Prior to that, he was Professor of Industrial Engineering and Dean of University College at the University of Oklahoma, Norman. He is a registered professional engineer (PE), a certified Project Management Professional (PMP), a Fellow of the Institute of Industrial Engineers, and a Fellow of the Nigerian Academy of Engineering. He has BS in Industrial Engineering, MS in Mathematics, and MS in Industrial Engineering from Tennessee Technological University, and Ph.D. in Industrial Engineering from the University of Central Florida. His areas of interest include mathematical modeling, project modeling and analysis, economic analysis, and productivity analysis and improvement. He is the author of several books and technical journal articles. He is the editor of the Handbook of Industrial & Systems Engineering.

He is a member of several professional associations including Institute of Industrial Engineers (IIIE), Institute for Electrical and Electronics Engineers (IEEE), Institute for Operations Research and Management Science (INFORMS), American Society for Engineering Education (ASEE), New York Academy of Science (NYAS), and Project Management Institute (PMI). He has served as a consultant to several organizations around the world including Russia, Mexico, Taiwan, Nigeria, and Ghana. He has conducted customized training workshops for numerous organizations including Sony, AT&T, Seagate Technology, U.S. Air Force, Oklahoma Gas & Electric, Oklahoma Asphalt Pavement Association, Hitachi, Nigeria National Petroleum Corporation, and ExxonMobil. He has won several awards for his teaching, research, publications, administration, and professional accomplishments. He holds a leadership certificate from the University Tennessee Leadership Institute. Prof. Badiru has served as a Technical Project Reviewer, curriculum reviewer, and proposal reviewer for several organizations including The Third-World Network of Scientific Organizations, Italy, National Science Foundation, National Research Council, and the American Council on Education. He is on the editorial and review boards of several technical journals and book publishers. Prof. Badiru has also served as an Industrial Development Consultant to the United Nations Development Program. He was the 2011 Federal Employee of the Year Award in the Managerial Category, International Public Management Association, Wright Patterson Air Force Base. He has also received other national and international awards and recognitions.

EDUCATION
1979 Bachelor of Science, Industrial Engineering, Tennessee Technological University
1981 Master of Science, Mathematics, Tennessee Technological University
1982 Master of Engineering, Industrial Engineering, Tennessee Technological University
1984 PhD, Industrial Engineering, University of Central Florida
Upon joining the Lean Systems Program in 2006, Dr. Maginnis helped redesign and continuously improve Lean Certification program, and led the production system.

Before returning to the University of Kentucky in 2005 to pursue a master's degree in Manufacturing Systems Engineering (2007) and a Ph.D. in Mechanical Engineering (2012), Dr. Maginnis had already earned an M.S. degree in Metallurgical Engineering and Materials Science (1986) from the University of Kentucky. He spent 8 years conducting research on high temperature materials for the U.S. Bureau of Mines followed by 10 years in dental materials manufacturing prior to joining UK's Lean Systems Program. During that time he experienced a variety of quality initiatives and learned first-hand the operational and cultural challenges associated with performing systematic problem solving and creating an environment of continuous improvement. It was those experiences which led him to return to the University of Kentucky where his focus centered on the Toyota Production System.

Upon joining the Lean Systems Program in 2006, Dr. Maginnis helped redesign and continuously improve Lean Certification program, and led the development and application of the Lean Systems learning laboratory until 2014 when he was appointed the program's first academic coordinator. Along the way he earned his Ph.D. in Mechanical Engineering in 2012, focusing on the importance of standardization to team member learning and the development of sustainable continuous improvement capabilities within organizations.

Over the years, Dr. Maginnis has worked closely with other members the Lean Systems Program which includes current and retired Toyota leaders and has participated in and has led transformational and problem solving activities in a variety of industries including manufacturing, healthcare and fast food service.

Currently, the majority of Dr. Maginnis time revolves around his roles as both the Academic Coordinator for the Lean Systems Program and the Director of Certificate Studies for the Lean Graduate Certificate program within the College of Engineering. His primary activities include developing and teaching academic courses based on the lean programs' professional courses, and creating a viable learning development pathway for students interested in the Toyota Production System with the goal of providing workplace-ready students for Toyota and other companies.

Dr. Lynn Miller-Wietecha is currently Online Program Producer at Lawrence Technological University, Dearborn Heights Virtual Academy. She has extensive experience Full-time faculty member in Instructional Technology Program. Taught graduate level courses in Instructional Design, Evaluation and Technology Integration.

**Designing a Blended Online Lean Six Sigma Training**

**Abstract**: One of the barriers for implementing training in globally located organizations is the high cost, increased time and complexity presented by stratified business processes that are spread geographically. Bringing teams to one “brick and mortar” training location to train using traditional classroom training techniques is not cost effective, nor practical in these complex conditions of globally spread value streams. This presentation will present a treatise on various models that the presenters have utilized for Lean Six Sigma training over a number of years. These methods span across a wide range of blended learning techniques such as asynchronous training at strategic locations, phone conference based training, online synchronous training, asynchronous online training with location based project reviews and the most effective method of asynchronous training with synchronous online project tollgate based reviews. These methods have been practiced by the presenters since 2001 and have been sequentially...
improved over time to design a cost effective, efficient and proven method which has been implemented in the University and Industry settings. Blackboard and Moodle platforms have been successfully utilized. Data will be presented that shows how student engagement is achieved and trainee projects will be reviewed to show the high quality of projects implemented in this learn, practice and train method of Lean Six Sigma certification.

Session III: Global Engineering Education
Room - Engineering Building E200, 4:00 – 5:15 pm
Session Chair: Paul Nutter, Ohio Northern University

4:00 – 4:25 (Friday)

Srinivas Ganapathyraju, Ph.D
Professor and Coordinator
Electromechanical Engineering Technology
Sheridan College Institute of Technology & Advanced Learning
Brampton, Ontario, Canada

Dr. Srinivas Ganapathyraju is a Professor and program coordinator for the Electromechanical Engineering program at Sheridan Institute of Technology in Ontario, Canada. He has over 15 years of experience in industry and academia. He has worked as an automation design engineer in Singapore, designing pick and place manipulators used in integrated microchip testing and assembly. As an engineering intern at Jaguar Cars in Birmingham, England, he worked on an artificial neural network system to test for spot weld quality, which was part of his master’s project work. He was also an industrial engineering intern at Helwig Carbon Products in Milwaukee, Wisconsin, helping to design and implement cellular manufacturing for the brush fabrication facility and ERP implementation. He was a teaching assistant at the University of Wisconsin – Milwaukee, prior to joining Sheridan. At Sheridan Institute of Technology, he was instrumental in developing two new programs. He has taught and continues to teach a number of courses including robotics, programmable logic controllers, CAD/CAM, CIM, advanced manufacturing systems, engineering economics, mechanics of materials, and engineering metrology. He has been active in applied research and awarded NSERC funding for his work.

He received his B.Tech (Honors) degree in Mechanical Engineering from the University of Zimbabwe, an MSc degree in Advanced Manufacturing Systems from the Nottingham Trent University in England and PhD in Industrial and Manufacturing Engineering with a minor in Computer Science from the University of Wisconsin - Milwaukee. His teaching and research interests are in the area industrial robotics and automation, Computer Aided Design and Manufacturing, and Machine Vision. He has presented a number of research papers at international conferences in the area of robotics and machine vision. He is registered as an Engineer in Training (EIT), while working towards his Professional Engineering (P.Eng) designation.

4:25 – 4:50 (Friday)

Dr. Rashmi Jha
Associate Professor and Program Coordinator of Master of Computer Applications
Gitarattan International Business School
Guru Gobind Singh Indraprastha University
New Delhi, India

Dr. Rashmi Jha is currently working as an Associate Professor & HOD in IT department of Gitarattan International Business School (giBS), affiliated to Guru Gobind Singh Indraprastha University) New Delhi. She is PhD, M. Phil, MCA, HSM, DCO & CWDM in Computer Science. She is a Lean Six Sigma Green Belt Certified Computer Professional. She has more than 20 years working experience in computer field; 14 years experience of teaching to MCA and B. Tech. students of GGSIPU, IGNOU, MAHE and Delhi University and 6 years experience in Computer Programming.

She has authored 31 research papers in various peer-reviewed National & International Journals and Conferences, including International Book Review. She has also presented IEEE International Paper at Tianjin University in China on the topic “Implementing Best Practices in ERP for Small & Medium Enterprises” for IEEE Symposium of Advanced Management of Information for Globalized Enterprises (AMIGE’ 08), jointly organized by IEEE, Arizona University (USA), Tsinghua & Tianjin University, UMBC, SAP & CN in September 2008. Her research interests include Natural Language Processing, Software Engineering, ERP, Lean Six Sigma, Sustainable Development of Small and Medium Enterprises Internet and E-Commerce Security etc.

She has organized and attended more than Sixty Conferences/ Seminars / Workshops/ FDPs held at National and International level on various emerging issues in “Information Technology, Management Development and Quality Improvement Programmes” for Teachers and Working Executives in Delhi. She is a Life Member of professional bodies like CSI, IEOM and KINDUZ Consulting Group India.
Paul Nutter, MBA, CMfgE, CQE, CQA  
Associate Professor and Chair  
Department of Technological Studies  
Ohio Northern University  
Ada, Ohio, USA  

Manufacturing Simulation Projects for Experiential University Learning and Partnerships  

Abstract: Ohio Northern University has used advanced industrial computer simulations for over 16 years to provide manufacturing technology majors with effective experiential projects. Two semesters provide a foundation in high-level CAD and manufacturing simulation applications. Students then work with local companies to create simulations of manufacturing operations to analyze ergonomic, robotic, process flow, throughput and cost reduction opportunities. Teams of students then prepare and present a PowerPoint of analysis and recommendations to company representatives. Example companies include major automotive original equipment manufacturers (OEMs) and suppliers, and a major defense-industry company. This presentation explains the curriculum, applications and process, along with specific projects using manufacturing simulations, which have contributed to excellent industrial partnerships and student placements.

Bio: Paul Nutter is an Associate Professor and dept. chair at Ohio Northern University, teaching manufacturing technology since 2000. He has 26 years’ experience in industrial and manufacturing engineering, primarily with Rockwell Automotive. Professionally Paul is active in the Society of Manufacturing Engineers as faculty advisor for SME Student Chapter S186, and is chair for the national SME Manufacturing Knowledge Base WIKI committee. He has served on many national committees, and received the 2009 national SME Award of Merit.

Saturday (September 24, 2016)

Session IV: Global Engineering Education  
Room - Engineering Building E200, 8:00 – 9:15 am  
Session Chair: Dr. Quazi K. Hassan, Univeristy of Calgary, Alberta, Canada  

08:00 – 08:25 (Saturday)  
Dr. Md. Mizanur Rahman  
Senior Lecturer, Department of Thermo Fluids  
Faculty of Mechanical Engineering  
University Technology Malaysia (UTM)  
Skudai, Johor Bahru, Malaysia  

Dr. 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.

08:25 – 08:50 (Saturday)  
Eui H. Park, Ph.D.  
Graduate Program Coordinator  
Professor, Department of Industrial and Systems Engineering  
North Carolina A&T State University  
Greensboro, North Carolina  

Dr. Eui H. Park, Professor of the Department of Industrial and Systems Engineering (ISE) at North Carolina A&T (NC A&T) State University, received his Ph.D. from Mississippi State University in 1983. Upon completion of his Ph.D., he joined NC A&T and has since initiated and developed a successful Human-Machine Systems Engineering program and interdisciplinaty manufacturing program. He has also conducted STEM outreach programs, the Para-Research Program, Partnership in Education and Research, REU, and RET, for the past sixteen years. He is the founder of teaching factory, Piedmont Triad Center for Advanced Manufacturing. Dr. Park was also the Chairperson of the ISE Department for sixteen years from July 1990. He has been an IIE Fellow since 2000. His research interest include Human-Machine Systems Engineering and Quality Assurance. He has been a principle investigator in 24 awarded funded research projects totaling over $12 million in the past ten years.
08:50 – 09:15 (Saturday)

Farnaz Ghazi-Nezami, PhD, CSSGB
Assistant Professor
Industrial and Manufacturing Engineering Department
Kettering University
Flint, Michigan, USA

Farnaz Ghazi-Nezami is an Assistant Professor in the Industrial and Manufacturing Engineering Department at Kettering University. She received her Ph.D. in Industrial and Manufacturing Engineering from Wichita State University. She also earned her masters and undergraduate degree in Industrial Engineering in Iran, Tehran. Dr. Ghazi-Nezami is a Certified Six Sigma Green Belt (CSSGB) from the American Society for Quality (ASQ), and received the Energy Assessment Certification from the Department of Energy. Her research interests include applied optimization, sustainability, energy efficient manufacturing systems, supply chain and operations management, and engineering education. In educational research, her interests include online education, active learning and entrepreneurial mindset development in engineering classes.

Session V: Global Engineering Education
Room - Engineering Building E200, 11:30 am – 12:45 pm

Session Chair: Dr. Daw Alwerfalli, Lawrence Technological University, Southfield, Michigan, USA

11:30 – 11:55 (Saturday)

Dr. Daw Alwerfalli
Professor of Mechanical/Manufacturing Engineering
Director of Master of Engineering Management Program
College of Engineering
Lawrence Technological University
Southfield, Michigan, USA

Prominent professor, senior technical industry consultant and manufacturing engineering educator with a tremendous expertise in program and curriculum development in higher technical education. Highly experienced and dedicated community leader with great ability to work with an array of constituencies and coalitions in developing shared organizational vision to create and implement strategies aimed at advancing common causes to accomplish goals in fulfillment of the organization's mission. Highly perceived expert and industrial advisor. He is the founder of Manufacturing Engineering Solutions (MES) a consulting firm founded in 2000. He is senior technical consultant and strategist to the US manufacturing industry. MES developed executive training programs to numerous organizations such as Chrysler, Ford, GM, Exxon Mobil, Conco Philips, Marathon and Tier I and II suppliers to the US auto industry and other international companies. Published numerous research papers in many national and international conferences.

Dr. Alwerfalli is a recipient of many prestigious awards including, the 2009 Arab American of the year in education, 1997 Lawrence Tech. Excellence in Teaching Award, 2004 Outstanding Engineering Faculty. He serves on many boards of directors, he also served on the Advisor Council of the Governor of Michigan for the Arab American and Chaldean Affairs Committee. He is currently serving on the steering committee of MAT 2 for dual education where he is a lead assessor to evaluate colleges for readiness in joining MAT 2 coalition of several German US based companies. Dr. Alwerfalli is also serving on the steering committee of “LIFT” Lightweight Innovation for Tomorrow, the committee is to develop innovative educational curriculum and skills for the next generation workforce for the Michigan, Ohio, Indiana and Tennessee under $148 Million, a federal grant for the years 2015-2016. For several years, Dr. Alwerfalli served as the academic advisor of many doctoral students who obtained their doctorate degrees and are currently leaders in the US auto industry.

11:55 – 12:20 (Saturday)

Dr. Devdas Shetty
Dean, School of Engineering and Applied Sciences
Professor of Mechanical Engineering
University of the District of Columbia
Washington DC, USA

Dean Shetty joined University of the District of Columbia in 2012, having previously served as Dean of Engineering at Lawrence Technological Institute and Dean of Research at the University of Hartford.

While with the University of Hartford, Dr. Shetty was first Chair of the Vernon D. Roosa Endowed Professorship. In addition, he was the Director of the Engineering Applications Center, through which he established partnerships with more than 50 Connecticut industries. During 2008 and 2009, Dr. Shetty served as Dean of the College of Engineering for Lawrence Technological University in Michigan. During that time, he initiated several new academic programs, established partnerships and contributed to curricular innovation. Prior to coming to Hartford, Dr. Shetty held academic positions at the Albert Nerkin School of Engineering at the Cooper Union for the Advancement of Science and Art in New York City.

Dr. Shetty is the author of three books and more than 200 scientific articles and six patents. His books on Mechatronics and Product Design are widely used as a textbook in many universities around the world. Dr. Shetty's research work has been cited for original contribution to the understanding of engineering surface measurement, for significant intellectual achievements in mechatronics and for contributions to product design. He is especially well-known for his contributions in establishing partnerships between the University and industries.
Dr. Shetty had been leading research efforts in a U.S. Army research project on Unmanned Aerial Vehicles. In partnership with Albert Einstein College of Medicine in New York, he invented the patented mechatronics process for supporting patients. Dr. Shetty has chaired several international conferences and presented keynote lectures. Major honors received by Prof. Shetty include James Frances Bent award for Creativity, the Edward S. Roth National Award for Manufacturing from the Society of Manufacturing Engineers, American Society of Mechanical Engineer Faculty Award, and Society of Manufacturing Engineers Honor award. He is an elected member of the Connecticut Academy of Science and Engineering.

Dr. Chakravarthy has significant industrial experience by consulting with GM, FORD, PCE, and UPS. He has also served as Engineering Manager for Operations Research Division in General Motors in 2000/2001. Dr. Chakravarthy has been a visiting faculty at the Department of Statistics and Operations Research, Complutense University of Madrid, Madrid, Spain, the Department of Mathematics, Cochin University of Science and Technology, Cochin, India, and the Department of Mathematics and Statistics, Victoria University of Wellington, Wellington, New Zealand.

Dr. Chakravarthy’s recognitions and awards include (a) Distinguished Faculty - 2015 (Kettering’s Faculty and Alumni Honor Wall); (b) NSF Conference Award - Co PI (DMS-1360865), 2014-2015; (c) Rodes Professor, Kettering University, 2010-2012; (d) Kettering University Distinguished Research Award, 2003; (e) Kettering University/GMI Alumni Outstanding Teaching Award, 2001; (f) Sloan Grant for developing ALN courses at Kettering University, 2000; (g) GMI Outstanding Research Award, 1996; (h) Sloan Faculty/Industry Exchange Fellowship, 1996; (i) GMI Research Initiation/Improvement Grant, 1995; (j) NSF Conference award (DMI-9424312), 1995; (k) NSF Research award (DDM-9313283), 1993-1997; (l) GMI Alumni Outstanding Teaching Award, 1990; GMI Research Initiation/Improvement Grant, 1995; (m) Lilly Faculty/Industry Exchange Fellowship, 1988. Dr. Chakravarthy has significant industrial experience by consulting with GM, FORD, PCE, and UPS. He has also served as Engineering Group Manager for Operations Research Division in General Motors in 2000/2001.

Dr. Chakravarthy’s professional activities include serving as (a) Area Editor for the journal, Simulation Modelling Theory and Practice; (b) Associate Editor for the journal IAPQR TRANSACTIONS - Indian Association for Productivity, Quality & Reliability; (c) Advisory Board Member for several other journals and International Conferences; (d) Reviewer for many professional journals; and (e) External Examiner for a doctoral thesis from abroad.
2:55 – 3:20 (Saturday)

**Robert P. Van Til, Ph.D.**  
Pawley Professor of Lean Studies and Chair  
Industrial and Systems Engineering Department  
Oakland University  
Rochester, Michigan, USA

**Integrating Product Lifecycle Management into an ISE Educational Program**

**Abstract:** The presentation will follow the evolution of the Oakland University Industrial and Systems Engineering Department's integration of Product Lifecycle Management (PLM) concepts and tools into its educational programs in ISE and Engineering Management. The process began with the integration of PLM tools into several existing ISE courses and the creation of a keystone course which presents PLM as a business concept. The next step involved offering application focused courses where students learn how to use a particular PLM tool while applying the tool on several projects. Application focused courses developed and offered to-date include topics such as product data management, robotics, ergonomics, change management, and integrated materials management.

**Biography:** Robert Van Til is the Pawley Professor of Lean Studies and Chair of Oakland University's Industrial and Systems Engineering Department. He earned a B.S. in Mechanical Engineering from Michigan State University as well as M.S. and Ph.D. degrees in Mechanical Engineering from Northwestern University. Dr. Van Til is also associated with Oakland University's Pawley Lean Institute. Dr. Van Til's educational and research interests focus on the modeling, analysis and control of manufacturing systems, lean and Product Lifecycle Management (PLM). His projects have been supported by the National Science Foundation and the Michigan Economic Development Corp. as well as by companies such as Fiat Chrysler Automobiles, Ford Motor Co., Siemens PLM Inc. and the Crittenton Hospital Medical Center. He has served in visiting positions at universities in Hawaii, the Netherlands and Australia.

3:20 – 3:45 (Saturday)

**Dr. Leslie Monplaisir**  
Department Chair  
Industrial and Systems Engineering  
Wayne State University  
Detroit, Michigan

Leslie Monplaisir, Associate Professor of Industrial and Systems Engineering, is Chair of the Department of Industrial and Manufacturing Engineering at Wayne State University (WSU). He is a Lead Researcher and Director of the Product Development and Systems Engineering Consortium (PDSEC) at WSU. His research interests include: Lean Product Development, Design for lean Systems and Services and Design reuse, Collaborative PD Decision Making, Product Architecture Optimization, Design for Supply Chain, Global Product Platform Optimization and Healthcare Technology System Design. He has authored over 100 publications in these areas with funded research from NSF, Ford, GM, Sun Microsystems, Tardec, VA and PTC.

Monplaisir joined the College of Engineering at Wayne State University in the Department of Industrial and Manufacturing Engineering in 1998 from Florida A & M University where he was a visiting assistant professor. He earned his PhD in Engineering Management from the Missouri University of Science and Technology (MUST), a master's in Computer Integrated Manufacturing from the University of Birmingham in Great Britain, and bachelor's in Mechanical Engineering from the University of the West Indies in Trinidad.

Session VII: Global Engineering Education  
Saturday, 4:00 – 5:15 pm  
Room - Engineering Building E200

**Dr. Matthew Ohland**  
Professor, School of Engineering Education  
Purdue University  
West Lafayette, Indiana, USA

**CATME SMARTER Teamwork**

Dr. Ohland is a Professor of Engineering Education at Purdue University. Along with his collaborators, he has been recognized for his work on longitudinal studies of engineering students with the William Elgin Wickenden Award for the best paper published in the Journal of Engineering Education in 2008 and 2011, the best paper in IEEE Transactions on Education in 2011 and other awards. The CATME Team Tools developed under Dr. Ohland's leadership and related research have been used by more than 550,000 students of over 10,500 faculty at more than 1600 institutions in 72 countries, and were recognized with the 2009 Premier Award for Excellence in Engineering Education Courseware and other awards. He is a Fellow of ASEE and IEEE and has received teaching awards at Clemson and Purdue. Dr. Ohland is an ABET Program Evaluator, an Associate Editor of IEEE Transactions on Education, and Past Chair of the IEEE Curriculum and Pedagogy Committee. He was the 2002–2006 President of Tau Beta Pi and has been a Facilitator for Tau Beta Pi's award-winning Engineering Futures program since 1996 and has delivered 116 seminars to 2409 students around the country.
Sunday (September 25, 2016)

Session VIII: Global Engineering Education
Room - Engineering Building E200, 8:00 – 9:15 am
Session Chair: Dr. Mukti M. Rana, Delaware State University, Dover, DE, USA

8:00 - 8:25 (Sunday)

**Dr. Mukti M. Rana**
Associate Professor and Chair
Department of Physics and Engineering &
Optical Science Center for Applied Research
Delaware State University
Dover, DE, USA

Dr. Mukti Rana is an associate professor and chair of the Department of Physics and Engineering and Optical Science Center for Applied Research (OSCAR) at Delaware State University (DSU). Dr. Rana received his B.Sc. in Electrical and Electronics Engineering from the Khulna University of Engineering and Technology, Bangladesh (1992-1997), and his M.S. (2000-2002) and Ph.D. (2003-2007) from The University of Texas at Arlington (UTA) in Electrical Engineering. He also worked as graduate teaching assistant, graduate research assistant and post-doctoral research associate (2007-2008) in the Department of Electrical Engineering during his tenure at UTA. In fall 2008, Dr. Rana joined as an Assistant Professor in the Department of Electrical and Computer Engineering at The University of South Alabama, Mobile. In 2010, he joined in the Department of Physics and Engineering and OSCAR of DSU. Dr. Rana is the principal investigator of two centers at DSU – Center for Research and Education on Optical Sciences and Applications funded by the National Science Foundation, and Optics for Space Technology and Applied Research Center funded by the National Aeronautics and Space Administration. Dr. Rana’s research projects are also supported by the Department of Defense and National Institute of Health. His current research interest includes thin film's properties for microsensors’ applications, uncooled infrared detectors and microelectro-mechanical (MEMS) devices. Dr. Rana has published more than 24 refereed journal articles and conference proceedings. Dr. Rana is a member of the IEEE and the founding student advisor of IEEE student branch at Delaware State University. Dr. Rana is the recipient of excellence in research award in 2016, vice president’s award for excellence in research in 2015 and excellence in outreach award 2015 for the college of mathematics, natural sciences and technology of DSU.

8:25 - 9:15 (Sunday)

**Dr. Harun Rashid**
Director of Staff Mentoring and Coaching
Hamadeh Educational Services serving Star International Academy, Universal Learning Academy, Universal Academy, and Noor International Academy
&
Adjunct Faculty, College of Education
Wayne State University

Dr. Rashid has published numerous conference and journal papers. He has served in dissertation committees. Dr. Rashid has served as a panel member for many educational related services. He has offered lecture/ professional development training for educators at many private and public educational institutions nationally international including Wayne County Community College, Detroit Public Schools (Davison Elementary, Katherine B. White Elementary School, Cleveland Middle School, Northern High School), Hamtramck Public Schools, Caniff Liberty Academy, Crescent Academy International, Huda School, IAGD Weekend School, Al-Ikhlas Training Academy, Tawheed Center School, Al-Ihsan Academy, Muslim American Youth Academy, Genesse Academy (Flint), American Muslim Diversity Association (AMDA), ICA (Franklin), MDE Social Studies Conference (at WSU Nov. 1988), Michigan Institute of Professional Psychology in Farmington Hills and Michigan Public School Academies (MAPSA). He facilitates in-service professional development training on evaluating and mentoring teachers, Principals, Deans, Instructional Coaches, Department Heads, Curriculum Coordinators, Program Directors, Teacher Mentors, and other professionals at all levels of teaching and learning. Dr. Rashid also provides customized workshops for educators on effective planning and preparation for instruction, highly effective differentiated instructional strategies, and checking for understanding through authentic formative and summative assessment.

Dr. Rashid is a professional member of American Philosophical Association, Philosophy of Education Society, Association of Supervision and Curriculum Development, National Association of Secondary School Principals and Phi Delta Kappan.
Session IX: Global Engineering Education
Room - Engineering Building E200, 2:30 – 3:45 pm
Session Chair: Dr. Mohammad Rahman, Central Connecticut State University

2:30 – 2:55 (Sunday)

Dr. Jamal Bari
Associate Professor
Coordinator of Electronic Engineering Technology
School of Engineering Technology
Eastern Michigan University
Ypsilanti, Michigan

Dr. Bari is a faculty member at Eastern Michigan University, presently implementing and coordinating the undergraduate program in Electronic Engineering Technology. In the fall of 1997 he defended his dissertation and earned his Ph.D. in electrical engineering from the University of Arkansas. The problem he chose for his research is the control of a stochastic, nonlinear and uncertain model using adaptive control systems, including a modified extended Kalman filter and neural networks. One of the results from his dissertation was published in the Proceedings of the IEEE Conference on Decision and Control in December 1997. Dr. Bari has eight years of teaching experience and several years of industrial experience as an electrical engineer. He has taught a broad range of electronics courses and is experienced in curriculum development. He also directed, and successfully completed, a project funded by NSF for establishing an Instrumentation and Calibration lab.

2:55 – 3:20 (Sunday)

Dr. Jacqueline Chestnut
Adjunct Professor
Industrial and Systems Engineering Department
North Carolina A&T State University
Greensboro, NC, USA

Jacqueline Chestnut is an Adjunct Instructor for the Industrial & Systems Engineering in the College of Engineering at North Carolina Agricultural and Technical State University. She earned a Bachelor of Science and Master of Science in Industrial Engineering from North Carolina A&T State University, College of Engineering, Greensboro, North Carolina. Dr. Chestnut received a Ph.D. in Industrial Engineering from Mississippi State University in Starkville, Mississippi. She has published journal and conference papers. Dr. Chestnut has done research projects with General Motors, Jones International University, Lawrence Technological University and North Carolina A&T State University. Her research interests include human error, simulation, engineering and online education, human factors and ergonomics. She is a member of IEOM, ASEE, CUR, ASQ and Sloan.

3:20 – 3:45 (Sunday)

Dr. Mohammad Rahman
Assistant Professor
Manufacturing and Construction Management Department
Central Connecticut State University

Dr. Mohammad Rahman is an assistant professor in the Manufacturing and Construction Management Department at the Central Connecticut State University. His PhD is in Engineering Science, concentration in supply chain management. His Master degrees are in (i) Industrial & Production engineering, (ii) Industrial Manufacturing & Systems Engineering, (iii) Applied Statistics, and B.S. degree is in Mechanical Engineering. He served as an Assistant Professor and post-doctoral research associate at the University of Southern Mississippi and Louisiana State University, respectively. His research and teaching focused on supply chain strategy, decision making under uncertainty, and lean six sigma processes for quality. His research articles, appeared in academic journals, contributed to stochastic supply chain modeling, time series forecasting, emergency inventory management, and business decision under uncertainty. He also published several book chapters and presented topics in national and international conferences and forums.

Rahman served as PI and Co-PI in several research projects sponsored by US Department of Transportation (USDOT) and Mississippi Department of Education (MDE). He is an executive member of Industrial Engineering & Operations Management (IEOM) international forum and IEEE Xplore correspondent chair for IEOM chapter. He also served committees as a professional member with various responsibilities for Industrial & Systems Engineering Research Conference (ISERC), Decision Science Information (DSI) and Lean Six Sigma conferences. He regularly serves as a reviewer for referred journals.

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Session X: Global Engineering Education
Room - Engineering Building E200, 4:00 – 5:15 pm

Session Chair: Dr. Zakaria Mahmud, Lake Superior State University, Sault Sainte Marie, Michigan

4:00 – 4:25 (Sunday)

Quamrul Mazumder, Ph.D., P.E.
Associate Chair and Associate Professor
Department of Mechanical Engineering
University of Michigan – Flint

Dr. Quamrul Mazumder is currently an associate professor of mechanical engineering at University of Michigan-Flint. His areas of research include computational fluid dynamics, multiphase flow, quality in higher education, metacognition, motivation, and engagement of students. He is a Fulbright scholar travelled around the world to promote quality and globalization of higher education.

4:25 – 4:50 (Sunday)

Dr. Walton Hancock
Professor Emeritus Industrial and Operations Engineering and
Professor Emeritus of Health Services, Management and Policy
University of Michigan, Ann Arbor, MI, USA

Questionnaires can help create high-quality, productive workforces

Walton M. Hancock is professor emeritus of industrial and operations engineering and professor emeritus of health services, management and policy in the School of Public Health at the University of Michigan. He received his bachelor's, master's and doctoral degrees in engineering from Johns Hopkins University. Prior to joining the Michigan faculty in 1960, he was manager of industrial engineering and manager of quality control at the Lord Baltimore Press in Baltimore.

4:50 – 5:15 (Sunday)

Dr. Zakaria Mahmud
Associate Professor, Mechanical Engineering
Lake Superior State University
Sault Sainte Marie, Michigan

Dr. Zakaria Mahmud is an associate professor of mechanical engineering at Lake Superior State University (LSSU), Sault Ste. Marie, Michigan. Prior to joining at LSSU, Dr. Mahmud taught at North Dakota State University, Georgia Southern University, and Texas A&M University. He received his bachelors from Bangladesh University of Engineering and Technology (Bangladesh), masters from the Royal Institute of Technology (Sweden), and doctoral from the University of Alabama (Alabama). His background is in experimental fluid mechanics with specialization in aerodynamic flow control.
The International Federation of Engineering Education Societies (IFlES)

IFlES was founded in 2006, at the American Society for Engineering Education's Global Conference in Rio de Janeiro, Brazil. Engineering education leaders from around the world had gathered the previous year to explore to possibilities of creating an international organization for engineering education societies. IFlES is proud to be leading the effort in connecting the world's engineering education societies and leveraging our members' collective strengths in order to improve engineering education worldwide. IFlES members represent a diversity not only in cultures, but in engineering education interests, from quality assurance to engineering education, from pedagogy to the role of technology in the classroom. IFlES member societies are expanding their global reach, and new relationships and collaborations are created all the time through IFlES' global network.

Through the collaboration of its member societies, IFlES will work to establish effective engineering education processes of high quality around the world to assure a global supply of well-prepared engineering graduates. IFlES will strengthen member organizations and their capacity to support faculty and students. It will attract corporate participation, helping to connect engineering graduates with international corporations that have a pressing need for well-trained engineers who can work in a global environment. IFlES will also enhance the ability of engineering faculty, students and practitioners to understand the varied cultures of the world and work effectively in them.

Global Engineering Deans Council (GEDC)

Recognizing the global need for a world-wide forum of engineering deans and rectors, a group of over 20 leaders of engineering education institutions and corporate partners first met in Rio de Janeiro, Brazil, on 9 October 2006 and in Istanbul, Turkey, on 30 September 2007. Encouraged by IFlES and modeled after the ASEE Engineering Deans Council (EDC), the Global Engineering Deans Council (GEDC) was created on 9 May 2008 in Paris, France. The main goal of the GEDC is to provide engineering deans and rectors with ideas, tools, and “best” practices necessary to become innovative leaders of engineering education.

The GEDC holds annual meetings surrounding four strategic objectives: Institutional Leadership, Curriculum Leadership, Policy Leadership and Accreditation Leadership. Accommodating for its diverse membership, the GEDC has met in Argentina, Brazil, Turkey, France, and the United Arab Emirates, and will meet in the United Kingdom

Represented by Dr. Hans J Hoyer (Secretary General, IFlES and Executive Secretary, GEDC)

AFRICAN ENGINEERING EDUCATION ASSOCIATION (AEEA)

The African Engineering Education Association (AEEA) was established at University of Pretoria, South Africa in 2006 after the 3rd African Regional Conference on Engineering Education. The Association was registered in Nigeria in 2012. AEEA is a member of the International Federation of Engineering Education Societies (IFlES). It also has relationship with other national, regional and international organizations. The members of AEEA are from the five sub-regions (North, Southern, West, East and Central) of Africa.

Some of the objectives of the AEEA are to:
- Promote excellent quality engineering education in Africa and bridge the North-South divide
- Provide network opportunities of engineering educators through Regional Conference on Engineering Education
- Improve teaching and learning in educational institutions, through workshops for engineering educators.
- Enhance the development of next generation engineering educators with regional Postgraduate Training Centres
- Promote exchange of students across the continent through removal of international fee barriers.
- Promote technological careers for women, so as to increase the proportion of women in the engineering workforce.
- Collaborate with international organizations to promote research & development in engineering education in Africa.

AEEA's Activities

1st and 2nd African Regional Conference on Engineering Education (ARCEE) in 2002 & 2004 at the University of Lagos, Nigeria

3rd ARCEE in 2006 at Univ. of Pretoria, South Africa

4th ARCEE in 2008 at Dar es Salaam, Tanzania

In 2008, AEEA co-hosted the 7th American Society of Engineering education (ASEE) Global Colloquium on Engineering Education and 2nd Summit of the International Federation of Engineering Education Societies (IFlES) at Univ. of Cape Town, South Africa

China-AEEA Capacity Building Workshop was held in Tsinghua University, Beijing, China for AEEA members from the five African sub-regions in 2009.

5th ARCEE 2013 and Inauguration of the African Engineering Deans’ Council (AEDC) at the University of Lagos, Nigeria.

The 6th African Regional Conference on engineering education has been scheduled in South Africa in 2016.

Prof. Funso Falade, President, AEEA
## TECHNICAL PROGRAM

### September 23, 2016 (Friday)

**Session: 8:00 – 9:15 am**

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<td>08:00 – 09:15</td>
<td><strong>Global Engineering Education I</strong></td>
<td>Eng. E200</td>
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<td>Session Chair: Dr. Srikant Raghavan, Lawrence Technological University</td>
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<td>08:00 – 08:25</td>
<td><strong>Ms. Tengku Shahraniza Bt Tengku Abdul Jalal</strong></td>
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<td>Head of Intensive English Language Programme</td>
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<td>Multimedia University, Malaysia</td>
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<td>ID 365: Workplace English: An Analysis of Communication Needs</td>
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<td>08:25 – 08:50</td>
<td><strong>Dr. Annamalai Pandian</strong></td>
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<td>Assistant Professor of Mechanical Engineering</td>
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<td>An overview of International Students in the USA [ID 367]</td>
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<td>08:50 – 09:15</td>
<td><strong>Dr. Srikant Raghavan</strong></td>
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### Industry Solutions I

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<td>08:00 – 09:15</td>
<td><strong>Industry Solutions I</strong></td>
<td>Eng. E201</td>
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<td>Session Chair: Joe LaRussa, Brose Group, Auburn Hills, Michigan</td>
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<td>08:00 – 09:15</td>
<td><strong>Joseph J. LaRussa, PE</strong></td>
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<td>Industrial Engineering Manager - Drives</td>
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<td><strong>Paul Ryznar</strong></td>
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### Quality

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<td>08:00 – 09:30</td>
<td><strong>Quality</strong></td>
<td>Eng. E202</td>
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<td>Session Chair: Abdul Talib BonUniversiti Tun Hussein Onn Malaysia</td>
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<td>ID 130 Implementation of a Statistical Process Control System for a Selected Industrial Plant</td>
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<td>Hassan Hijry and Abdulhadi Altherwi, Lawrence Technological University, Southfield, Michigan, United States</td>
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<td></td>
<td>ID 212 Application of statistical process control chart for monitoring electric power losses through transmission and distribution system: a case study</td>
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<td>Imad Alsyourf, Mohammad Shamsuzzaman and Eman Jasim, University of Sharjah, Sharjah, United Arab Emirates</td>
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<td>ID</td>
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<td>Authors</td>
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<tr>
<td>282</td>
<td>Multi-objective economic-statistical design of new t-Chart based on Process Capability Index</td>
<td>Mohammadsadegh Mobin, Western New England University, Springfield, MA, United States</td>
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<td></td>
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<td>Samrad Jafarian-Namin and Hamid Hasanzadeh, Yazd University, Yazd, Iran</td>
</tr>
<tr>
<td>216</td>
<td>Analysis of Accuracy Multivariate Control Chart T2Hotelling Free Distribution with Outlier Removal</td>
<td>Yuyun Hidayat, Titi Purwandari, and Alvionita, Department of Statistics, Padjadjaran University, Bandung, Indonesia</td>
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<td>Sukono and Sudrajat Supian, Department of Mathematics, Padjadjaran University, Bandung, Indonesia</td>
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<td>Abdul Taibl Bon, Department of Production and Operations, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Malaysia</td>
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<tr>
<td>343</td>
<td>Design of a mechanical cleaning device P.I.G (pipeline intervention gadget) connecting two transfer lines in Zimbabwe</td>
<td>Tawanda Mushiri, Department of Mechanical Engineering, University of Johannesburg, Johannesburg, South Africa</td>
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<td>Stephen Ndlovu, Department of Mechanical Engineering, University of Zimbabwe, Mt Pleasant, Harare, Zimbabwe</td>
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<td>Charles Mbohwa, Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa</td>
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<tr>
<td>08:00 – 09:15, FRIDAY</td>
<td>Undergraduate Student Presentation Competition</td>
<td>Room Eng. E203</td>
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<td>Session Chair: Dr. Abbas Mahmoudabadi, Mehrastan University, Gilan, Iran</td>
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<td>49</td>
<td>Growth of Food Tech: A Comparative Study of Aggregator Food Delivery Services in India</td>
<td>Mohan Khond, Mustafa Abbas, Harsh Balihallimath and Nishant Bidichandani, College of Engineering Pune, Pune, Maharashtra, India</td>
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<td>369</td>
<td>Plasma Engineered Anti-Oxidant Surfaces as Novel Food Packaging Material</td>
<td>Dominic Flaig and Ali R. Zand, Department of Chemistry &amp; Biochemistry; Kettering University, Flint, MI 48504</td>
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<td>370</td>
<td>Continuous Improvement using Time Study and Lean Manufacturing - A Case Study</td>
<td>Ana Magana, Industrial Engineering Program, Lawrence Technological University, Southfield, Michigan 48075, USA</td>
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<td>08:00 – 09:15, FRIDAY</td>
<td>Doctoral Dissertation Competition</td>
<td>Room Eng. E204</td>
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<td>Session Chair: Dr. Md. Mizanur Rahman, University Technology Malaysia</td>
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<td>206</td>
<td>Strategies and Techniques to Enhance Productivity in North American Automotive Industry</td>
<td>Amir Abolhassani, E. James Harner and Bhaskaran Gopalakrishnan, West Virginia University, Morgantown, WV, United States</td>
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<td>213</td>
<td>Developing a new Iterative Optimization-based Simulation (IOS) model with Predictable and Unpredictable Trigger Events in Simulated Time</td>
<td>Mohammad Dehghanimohammadabadi, Northeastern University, Boston, Massachusetts, United States</td>
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<td>219</td>
<td>Robust Solutions for Geographic Resource Allocation Problems</td>
<td>Mehdi Behroozi, University of Minnesota-Twin Cities, United States</td>
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<td>273</td>
<td>Multi Objective Optimization of Distributed Energy Systems Considering Renewable and Fossil Fuel Resources</td>
<td>Ali ElKamel and Azadeh Marouf, University of Waterloo, Waterloo, Canada</td>
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<td>Sourena Sattari, Tehran, Iran</td>
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<td>08:00 – 09:15, FRIDAY</td>
<td>Graduate Student Paper Competition</td>
<td>Room Eng. E205</td>
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<td>Session Chairs: Dr. Ahm Shamsuzzoha, Sultan Qaboos University, Oman and Hayder Zghair, Kettering University, Flint, MI, USA</td>
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<td>245</td>
<td>Worst-case demand distributions in vehicle routing</td>
<td>Mehdı Behroozi, University of Minnesota-Twin Cities, United States</td>
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<td>John Carlsson, University of Southern California, Los Angeles, California, United States</td>
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<td>184</td>
<td>An optimization model for scheduling emergency operations with multiple teams</td>
<td>Behroozi Bodaghı and Palaneeswaran Ekambaram, Swinburne University of Technology, Hawthorn, Victoria, Australia</td>
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<td>264</td>
<td>An ILP Model for Healthcare Facility Location Problem with Long Term Demand</td>
<td>Ruilin Ouyang, Department of Mathematics, Northeastern University, Boston, MA, USA</td>
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<td>Tasnim Ibn Faiz and Md Noor-E-Alam, Department of Mechanical and Industrial Engineering, Northeastern University, Boston, MA, USA</td>
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<td>328</td>
<td>Data Analytics and Visualization in Analyzing Mortality Records</td>
<td>Md Noor-E-Alam and Mehul R Patel, Northeastern University, Boston, Massachusetts, United States</td>
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<td>08:00 – 09:15, FRIDAY</td>
<td>GD&amp;T Workshop</td>
<td>Room Eng. E206</td>
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<td>8:00 - 8:20 am GD&amp;T ASME Standards and Fundamentals</td>
<td>Saso Krstovski, Ford Motor Company</td>
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<td>8:20 - 8:40 am Ford Corporate GD&amp;T Training and how engineers and designers work together on daily basis on GD&amp;T application and drawing including standards</td>
<td>Rochelle Courson, Product Design Senior, GD&amp;T and Ford Standards – Global Engine Engineering Dept., Ford Motor Company</td>
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<td></td>
<td>8:40 - 9:30 am GD&amp;T Fundamental and Rules</td>
<td>Dr. Joseph Ogundu, President and CEO – Emerald Global Consulting Inc., West Bloomfield, Michigna, USA</td>
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© IEOM Society International
Session – Friday (September 23): 9:30 – 11:00 am

09:30 am – Welcome Address

Dr. Virinder K. Moudgil
President of Lawrence Technological University
A200 – Architecture Auditorium

10:00 am – Opening Keynote

Carlo Materazzo
Head of World Class Manufacturing (WCM), FCA – Global
Fiat Chrysler Automobiles (FCA), Auburn Hills, Michigan
A200 – Architecture Auditorium

11:00 – Networking Break at Exhibition Hall – A210

Session – Friday (September 23): 11:15 – 12:45 pm

11:15 am - 12:00 pm – Keynote

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

12:00 – 12:45 pm – Keynote

Mr. Kevin Poet
Plant Manager, Rawsonville Component Plant
Ford Motor Company, Ypsilanti, MI
A200 – Architecture Auditorium

11:30 – 12:45, FRIDAY

GD&T Workshop

Room Eng. E206

11:00 am - 12:00 pm: GD&T Implementations Issues in Design and Manufacturing
Maksud Haq, Fiat Chrysler Automobiles (FCA)

12:00 -1:00 pm: GD&T with Hands-on Practices
Brian P. Heersink, DM/GDT/Gauging CAD Primary, CAD/CAE Department, TDE, Ford Motor Company

11:30 – 12:45, FRIDAY

Monte Carlo Simulation & Optimization for Robust Design with DiscoverSim Workshop

Room Eng. E207

John Noguera, Chief Technology Officer & Co-Founder, SigmaXL Inc.

12:45 – 1:00 pm – Networking Break at Exhibition Hall – A210
1:00 pm - Lunch Keynote

Dr. Jeffrey Abell
GM Technical Fellow, Lab Group Manager, Manufacturing Systems Research
General Motors Global Research and Development, Warren, Michigan
A200 – Architecture Auditorium (Lunch Provided)

2:00 – 2:30 pm – Networking Break at Exhibition Hall – A210

Session – Friday (September 23): 2:30 – 3:45 pm

2:30 – 3:45, FRIDAY   Global Engineering Education II   Room Eng. E200
Session Chair: Dr. Adedeji B. Badiru, Air Force Institute of Technology, Wright-Patterson, Dayton, Ohio

2:30 – 2:55:
Adedeji B. Badiru, Ph.D., PE, PMP, FIIE
Dean, Graduate School of Engineering and Management
Professor of Systems Engineering
AFIT/EN, Air Force Institute of Technology
Wright-Patterson Air Force Base
Dayton, Ohio, USA

2:55 – 3:20:
Dr. M. Abbot Maginnis
Lean Systems Program Academic Coordinator &
Director of Certificate Studies
University of Kentucky
Lexington, KY

3:20 – 3:45:
Dr. Jayant Trewn, Fellow ASQ
Adjunct Faculty
A. Leon Linton Department of Mechanical Engineering
Lawrence Technological University
Southfield, MI 48075, USA

Dr. Lynn Miller-Wietecha
Interim Director
eLearning Architect and Program Producer
Department of eLearning
Lawrence Technological University
Southfield, MI 48075, USA

2:30 – 3:45, FRIDAY   Industry Solutions II   Room Eng. E201
Session Chair: Foad Hosseinkhanli, Amor Health Services, Inc., Brownsville, Texas, USA

2:30 – 2:55:
Edly Ferdin Ramly
Certification Director
EFR Certification
Johor Bahru, Malaysia

2:55 – 3:20:
Md Kawsar Ali
Chief Operating Officer
Comfit Composite Knit LTD
Dhaka, Bangladesh

3:20 – 3:45:
Foad Hosseinkhanli
Director of Quality Assurance, Performance and Business Improvement
Amor Health Services, Inc.
Brownsville, Texas, USA

2:30 – 3:45, FRIDAY   Lean   Room Eng. E202
Session Chair: Javed Cheema, Altarum Institute, Ann Arbor, Michigan, United States

ID 039   Relationship between lean manufacturing implementation and leadership styles
Carlos Emanni Fries, Guilherme Tortorella and Diego de Castro Pettermann, Federal University of Santa Catarina, Florianopolis, Brazil

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ID 045  Lean Gamification between Industry and University  
Ahmed Deif, California Polytechnic State University, San Luis Obispo, CA, United States

ID 120  Designing an Efficient Medical Logistic System Using Kanban in Large Hospital Systems  
Javed Cheema, Altarum Institute, Ann Arbor, Michigan, United States  
Muhammad Bajwa, Henry Ford Health System, West Bloomfield, Michigan, United States

ID 128  The Applicability of Lean Maintenance in The Container Handling Industry  
Akram Ebeid, Suez Canal Container Terminal (APMT) / AAST, Alexandria, Alexandria, Egypt

ID 339  Optimization in the management of time in the emergency service for patients triage 2.  
Víctor Jaime García Urdaneta, Universidad del Rosario, Bogotá, Colombia  
Santiago Moros Portilla, Manager of the emergency service of Hospital Mayor (Mederi), Bogotá, Colombia  
Eliana K. Acuña Cárdenas, Logistic coordinator of the pharmacy service, Universidad del Rosario, Bogotá, Colombia  
Valeria Mendoza Cortés, Universidad del Rosario, Bogotá, Colombia

2:30 – 3:45, FRIDAY  
Operations Research  
Room Eng. E203

Session Chair: Md Noor-E-Alam, Northeastern University, Boston, Massachusetts, United States

ID 224  Scheduling on Two Uniform Machines with Unit Processing Times and Conflict Graph  
Mourad Boudhar, Faculty of Mathematics, USTHB UniversityBab-Ezzouar, Algiers, Algeria

ID 264  An ILP Model for Healthcare Facility Location Problem with Long Term Demand  
Md Noor-E-Alam, Tasnim Ibn Faiz and Ruliuin Ouyang, Northeastern University, Boston, Massachusetts, United States

ID 215  An Efficient Approach for Traveling Salesman Problem Solution with Branch-and-Bound  
Abdul Talib Bon, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia  
F Sukono, Universitas Padjadjaran, Indonesia  
Mochamad Suyudi, Universitas Padjadjaran Bandung, Indonesia

ID 121  Path planning for a mobile robot using ant colony optimization and the influence of critical obstacle  
Jihee Han, HyungJune Park and Yoonho Seo, Korea University, Seoul, Korea

ID 319  Causes of poor quality on SMEs: A Case of Gauteng SMEs, South Africa  
Charles Mbohwa and Lawrance Seseni, University of Johannesburg, South Africa

2:30 – 3:45, FRIDAY  
Energy  
Room Eng. E204

Session Chair: Azadeh Maroufmashat, University of Waterloo, Canada

ID 017  Analysis of Energy Cost Savings by Substituting Heavy Fuel Oil with Alternative Fuel for a Pozzolana Dryer. Case Study of Bamburi Cement  
Veronica Ngunzi, Kisii University, Kisii, Kenya

ID 172  Experimental Analysis of Power Consumption in Ceiling Fan  
Rupesh Bhortake and Vaishali Bhortake, TSSM's PVPIT, Bavdhan, Pune, Maharashtra, India

ID 225  Bio-diesel as an Alternative Fuel (Description, Benefits and Production Process)  
Majid Baseer Sarhad University of Science and Information Technology, Peshawar, Pakistan  
Muhammad Arsalan Khan, SUIT, Peshawar, Pakistan  
Abdul Shakoor, UET, Peshawar, Pakistan

ID 227  Effects of Temperature and Droplet Size on the Ignition Delay of Diesel and Bio-Diesel Blends  
Majid Baseer Sarhad University of Science and Information Technology, Peshawar, Pakistan  
Muhammad Arsalan Khan, SUIT, Peshawar, Pakistan  
Abdul Shakoor, UET, Peshawar, Pakistan  
Alam Zaib Khan, UET, Peshawar, Pakistan

ID 277  Technical and Economic Feasibility Study of Methanol Production from Flaring Gas in Iran  
Azadeh Maroufmashat, University of Waterloo, Canada  
Soureina Sattari, Tehran, Iran

2:30 – 3:45, FRIDAY  
Manufacturing and Design  
Room Eng. E205

Session Chair: Viktoria Butenko, Karlsruhe Institute of Technology, Karlsruhe, Baden-Württemberg, Germany

ID 131  Design and Validation of Prototype a Selective Laser Sintering System for Process Parameter Optimization  
Abass Enzi and James Mynderse, Lawrence Technological University, Southfield, Michigan, USA

ID 167  Engineering Trade-Off Strategies Design Evaluation for Fabrication Company in the Philippines  
Maricar Navarro and Bryan Navarro, Technological Institute of the Philippines, Quezon City NCP, Philippines

ID 174  Development of construction catalog for appropriate design of fiber reinforced Polymers  
Viktoria Butenko, Markus Spadinger and Albert Albers, Karlsruhe Institute of Technology, Karlsruhe, Baden-Württemberg, Germany
ID 238  Development of a dust minimization system for the coal wagon tippler section for a coal power plant
Charles Mbohwa and Ignatito Madanhire, University of Johannesburg, South Africa

ID 338  Predictive Control Design of Gas Turbine Using Multi-Objective Optimization Approach
Kamal Jafarian, Biosignal Processing Lab, Dept. of Biomedical Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran
Mohsamsadegh Mobin, Dept. of Industrial Engineering and Engineering Management, Western New England University, Springfield, MA, USA
Zahra Honarkar, Department of Aerospace Engineering, Sharif University of Technology, Tehran, Iran

2:30 – 3:45, FRIDAY  GD&T Workshop  Room Eng. E206

2:30 - 3:15 pm  GD&T Experience
Mark E. Foster, President, Applied Geometrics, Inc. (AGI), Harwood Heights, Illinois

3:15 – 3:45  Gaging and Inspection Experiences on GD&T
Jim Beary, NAO Inspection Technologies Manager & Dimensional Engineering Instructor, Benteler Automotive, Grand Rapids, Michigan

2:30 – 3:45, FRIDAY  Doctoral Dissertation Competition  Room Eng. E208

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

ID 289  Environmental Pollution Reduction in Cement Industry for Co2 Combustion of Waste Tyre and Coal as a Fuel
Rajendra Patil and Kanhayyalal Barbole, TSSM’S Padmabhooshan Vasantdada Patil Institute of Technology Bavdhan, Pune, Maharashtra, India

ID 363  Reliability Modeling and Optimization of New product Development Process
Mohsamsadegh Mobin, Western New England University, Springfield, MA, United States

ID 356  Analysis of Operational Efficiency Methods at Saudi Aramco: Applying Continuous Improvement Best Practices
Ahmed Aljabr and Daw Al Werfalli, Lawrence Technological University, Southfield, Michigan, USA

ID 372  Effective Attribute Charts for Monitoring Manufacturing and Service Industries
Salah Haridy, H. Milton Stewart School of Industrial & Systems Engineering at Georgia Tech, Atlanta, GA, USA

2:30 – 3:45, FRIDAY  Graduate Student Paper Competition  Room Eng. E209

Session Chairs: Dr. Ahm Shamsuzzoha, Sultan Qaboos University, Oman and Hayder Zghair, Kettering University, Flint, MI, USA

ID 362  An Intuitionistic Fuzzy-Based DEMATEL to Rank Risks of Construction Projects
Amin Vafadarnikjoo, Department of Management and Accounting, Allameh Tabataba’i University, Tehran, Iran
Mohsamsadegh Mobin, Dept. of Industrial Engineering and Engineering Management, Western New England University, Springfield, MA, USA
Seyyed Mohammad Ali Khatam Firoozabadi, Department of Management and Accounting, Allameh Tabataba’i University, Tehran, Iran

ID 205  What is Instagram? A social Media or a News Media
Sahar Maqsood, CUST, Islamabad, Pakistan

ID 266  Healthcare Delivery Framework for Urgent Care at Home
Tasnim Ibn Faiz, Ali Al-Muflih and Md Noor-E-Alam, Department of Mechanical and Industrial Engineering, Northeastern University, Boston, USA

3:45 – 4:00: Break

Session – Friday (September 23): 4:00 – 5:15 pm

4:00 – 5:15, FRIDAY  Global Engineering Education III  Room Eng. E200

Session Chair: Paul Nutter, Ohio Northern University

4:00 – 4:25:
Srinivas Ganapatyraju, Ph.D
Professor and Coordinator
Electromechanical Engineering Technology
Sheridan College Institute of Technology & Advanced Learning
Brampton, Ontario, Canada
4:25 – 4:50:
Dr. Rashmi Jha
Associate Professor and Program Coordinator of Master of Computer Applications
Gitarattan International Business School
Guru Gobind Singh Indraprastha University
New Delhi, India

4:50 – 5:15:
Paul Nutter, MBA, CMfgE, CQE, CQA
Associate Professor and Chair
Department of Technological Studies
Ohio Northern University
Ada, Ohio, USA

4:00 – 5:15, FRIDAY    Industry Solutions III    Room Eng. E201
Session Chair: Zakir Siddique, Cooper Standard Automotive, Novi, Michigan

4:00 – 4:25:
Sardar Asif Khan, M.Sc., MBA, PE, PMP
Manager - World Class Manufacturing (WCM)
Mack Engine Plant
Fiat Chrysler Automobiles (FCA)
Detroit, Michigan

4:25 – 4:50:
Moin Baig
CAE Engineer Airbag systems
General Motors Company
Warren, Michigan

Lean Product Development

4:50 – 5:15:
Zakir Siddique, PMP
Senior Program Manager
Cooper Standard Automotive
Novi, Michigan

4:00 – 5:15, FRIDAY    Quality and Reliability    Room Eng. E202
Session Chair: Mark Dolsen, TRQSS Inc., Tecumseh, ON, Canada

ID 287 Sustained Quality Award Status in Developing Country: A study on the Dubai Quality Award Recipients
Mehran Doulat and Shari Yusof, UTM, KL, Malaysia

ID 165 Reliability Modeling for Rotor Systems with Imbalance Based on Vibration Analysis
Mohamed Shafiullah Hussain V, National Institute of Foundry and Forge Technology, Ranchi, Jharkhand
V N A Naikan, Indian Institute of Technology, Kharagpur, West Bengal, India

ID 117 Scheduling group of jobs with the dedicated processing property on parallel machine shops
Sang-Oh Shim, Department of Business Administration and Accounting, Hanbat National University, South Korea

ID 274 Mizen Boushi in Mass Production: a framework for maintaining reliability in a dynamic environment
Mark Dolsen, Eric Legary and Murray Phillips, TRQSS Inc., Tecumseh, ON, Canada

ID 280 Reliability Evaluation and Design Optimization of Inventory Management System
Abdulaziz T. Almaktoom, Effat University, Jeddah, Mecca, Saudi Arabia
Krishna Krishnan and Ahmed Alsaadi, Wichita State University, Wichita, Kansas, United States

4:00 – 5:15, FRIDAY    Operations Management    Room Eng. E203
Session Chair: Tony Chihak, Mayo Clinic, Rochester, MN, United States

ID 005 Empirical Research Methodology on Operation Diagnosis to Identify Operation Improvement Opportunities
Musli Mohammad, Mohd Shahir Yahya and Edly Ferdin Ramly, Universiti Tun Hussein Onn Malaysia (UTHM), Batu Pahat, Johor, Malaysia

ID 181 Simulating Supplier-Producer Relationship in halal food Supply chain Using Agent Based Modeling
Layung Prasetyanti, Tokyo University of Science, Noda-shi, Chiba, Japan

ID 211 Improving Semiconductor Back-End Final Test Throughput via Rfid-Based Lot Control System
Rosnaih Mohd Yusuff, Universiti Putra Malaysia, UPM Serdang, Selangor, Malaysia
Sia Ying Ying, Serdang, Selangor, Malaysia
Mohd Amin Mohd Soom, Sandakan, Sabah, Malaysia

ID 230 Concurrent engineering: the drawbacks of applying a one-size-fit all approach
John Bang Mathiasen and Rasmus Munksgaard Mathiasen, Aarhus University Department of Business Development and Technology, School of Business and Social Sciences, Herning, Denmark
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<tr>
<th>ID</th>
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<th>Authors</th>
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<td>043</td>
<td>How the Industrial Engineer can Bend the Healthcare Cost Curve</td>
<td>Tony Chihak, Mayo Clinic, Rochester, MN, United States</td>
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<td>4:00 – 5:15, FRIDAY Design and Analysis Room Eng. E204</td>
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<td>Session Chair: Sarder Sadique, Marshall University, Huntington, WV, United States</td>
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| 281  | Evaluating Customer Retention and Satisfaction and the Reasons of Losing Customers in Auto Insurance (A case study) | Afshar Roshani, Western New England University, Springfield, MA, United States,  
       |                                                                      | Zahra Daneshfar, Allameh Tabataba'i University, Tehran, Iran,  
       |                                                                      | Hamid Sabzali, Tehran Azad University, Tehran, Iran.                                      |
| 284  | Design of Experiments and Web Page Designs: Theories and Applications | Lihui Shi, Centerfield Corporation, El Segundo, California, United States                   |
| 127  | Empirical Correlation of Consistency and Time of Trajectory for Industrial Robots | Hayder Zghair and Salem Lakrash, Lawrence Technological University, Southfield, MI, United States |
| 128  | Impact of Design Simplification Analysis (DSA) on Automotive Product Development | Daw Alwerfalli, A. Leon Linton Dertment of Mechanical Engineering, Lawrence Technological University, United States |
| 129  | Best Material for Commercial packaging of Food products and Incorporating Track and Trace systems | Sarder Sadique, Shaik Habeeb, Jinkala Chandra and Vatsal Bhatt, Marshall University, Huntington, WV, United States |
| 013  | Framework for Implementing Quality Management in West Bank Construction Projects | Ahmad Rashed, Nassar Stone, Hebron, West Bank, West Bank and Gaza,  
       |                                                                      | Mohammad Othman, An-Najah National University, Nablus, West Bank, West Bank and Gaza.       |
| 023  | Literature Review: Improving health and safety in the construction industry through cultural transformation | Natalie Skeepers, University of Johannesburg, South Africa                                  |
| 252  | Advancing Towards Delay-Free Construction Project: A Review          | Shahryar Sorooshian, Faculty of Technology, University Malaysia Pahang, Kuantan, Pahang, Malaysia,  
       |                                                                      | Richard Hannis Ansah, University of Malaysia Pahang, Kuantan, Pahang, Malaysia,  
       |                                                                      | Shariman Mustafa, Universiti Malaysia Pahang, Kuantan, Pahang, Malaysia.                  |
| 253  | Assessment of Environmental Risks in Construction Projects: A Case of Malaysia | Shahryar Sorooshian, Faculty of Technology, University Malaysia Pahang, Kuantan, Pahang, Malaysia,  
       |                                                                      | Richard Hannis Ansah, University of Malaysia Pahang, Kuantan, Pahang, Malaysia,  
       |                                                                      | Shariman Mustafa, Universiti Malaysia Pahang, Kuantan, Pahang, Malaysia.                  |
| 254  | An Environmental Impact Framework for Evaluating Construction Projects Delays | Shahryar Sorooshian, Faculty of Technology, University Malaysia Pahang, Kuantan, Pahang, Malaysia,  
       |                                                                      | Richard Hannis Ansah, University of Malaysia Pahang, Kuantan, Pahang, Malaysia,  
       |                                                                      | Shariman Mustafa, Universiti Malaysia Pahang, Kuantan, Pahang, Malaysia.                  |
| 135  | Application of Quality Management Systems (QMS) in Construction Industry | Daw Alwerfalli, A. Leon Linton Dertment of Mechanical Engineering, Lawrence Technological University, United States,  
       |                                                                      | Muteb Alshammari and Ashihan Karatas, Civil and Architectural Engineering, Lawrence Technological University, United States |
| 016  | Application of Quality Management Systems (QMS) in Construction Industry | Daw Alwerfalli, A. Leon Linton Dertment of Mechanical Engineering, Lawrence Technological University, United States,  
       |                                                                      | Muteb Alshammari and Ashihan Karatas, Civil and Architectural Engineering, Lawrence Technological University, United States |

### GD&T Workshop

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<td>3:45 – 4:15 pm</td>
<td><strong>GD&amp;T Experiences and Implementation Issues</strong></td>
<td>Tom Geiss, Lead Course Developer – GD&amp;T Basics, ASME Senior GD&amp;T Certified Professional, Pareto Learning LLC, South Carolina</td>
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<tr>
<td>4:15 – 4:45 pm</td>
<td><strong>GD&amp;T Experiences</strong></td>
<td>John-Paul Belanger, Certified Sr. GD&amp;T Professional, President, Geometric Learning Systems, Detroit, Michigan</td>
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<tr>
<td>4:45 – 5:15 pm</td>
<td><strong>Tolerance Stack up</strong></td>
<td>Dr. Ahad Ali, Associate Professor, Director of BSIE and MSIE Programs and Director of Smart Manufacturing and Lean Systems Research Group at Lawrence Tech</td>
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### Monte Carlo Simulation & Optimization for Robust Design with DiscoverSim Workshop

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<td>4:00 – 5:15, FRIDAY</td>
<td>Monte Carlo Simulation &amp; Optimization for Robust Design with DiscoverSim Workshop</td>
<td>John Noguera, Chief Technology Officer &amp; Co-Founder, SigmaXL Inc.</td>
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September 24, 2016 (Saturday)

Session: 8:00 – 9:15 am

08:00 – 09:15, SATURDAY    Global Engineering Education IV  Room Eng. E200
Session Chair: Dr. Farnaz Ghazi-Nezami, Kettering University, Flint, Michigan, USA

08:00 – 08:25:
Dr. Md. Mizanur Rahman
Senior Lecturer
Department of Thermo Fluids
Faculty of Mechanical Engineering
University Technology Malaysia (UTM)
Skudai, Johor Bahru, Malaysia

08:25 – 08:50:
Dr. Eui H. Park
Graduate Program Coordinator
Professor, Department of Industrial and Systems Engineering
North Carolina A&T State University
Greensboro, North Carolina

08:50 – 09:15:
Farnaz Ghazi-Nezami, PhD, CSSGB
Assistant Professor
Industrial and Manufacturing Engineering Department
Kettering University
Flint, Michigan, USA

08:00 – 09:15, SATURDAY    Industry Solutions IV  Room Eng. E201
Session Chair: Joseph Ghislain, Ford Motor Company

8:00 – 8:25 am:
Abdul Tailib Bon and Ooi Shi Jun
Department of Production and Operations Management
Universiti Tun Hussein Onn Malaysia
Raja, Johor, Malaysia

8:25 – 8:50 am:
Srini Mandadapu, MSE, MBA
Quality Leader - Product Development
Lead Master Black Belt (MBB)
General Motors

8:50 – 9:15 am:
Joseph Ghislain
North America Regional Manager & Global Body Exterior& Body Interior
Ford Motor Company - Lean Supplier Optimization (LSO), Global Purchasing
6-Sigma Black Belt, CEM, REM, CSDP, CP EnMS- Industrial, SEP P.V. – Industrial
Dearborn, Michigan

08:00 – 09:15, SATURDAY    Lean  Room Eng. E202
Session Chair: John Carrier, MIT Sloan School of Management, Arlington, MA, United States

ID 180  Effects of Human/Work Stress on Reliability of Lean Systems – a Markovian Approach
Rupy Sawhney, Roshanak Akram and Vahid Ganji, University of Tennessee, Knoxville, TN, United States

ID 239  An Investigation of Lean Manufacturing Implementation in Textile Industries of Pakistan
Zahid Abbass Shah and Hadia Hussain, University of the Punjab, New Campus, Lahore, Punjab, Pakistan

ID 256  Lean Construction Tools
Shahryar Sorooshian, Richard Hannis Ansah and Shariman Mustafa, Faculty of Technology, University Malaysia Pahang, Kuantan, Malaysia

ID 276  A Tale of Two Systems - How to Solve the Hidden Factory Problem
John Carrier, MIT Sloan School of Management, Arlington, MA, United States
Muhammed Asif, Rochester, MI, United States

ID 329  New Perspectives in Valued Service Excellence in Manufacturing Industry
Charles Mbohwa and Makhala Mpho Motebele, University of Johannesburg, South Africa
### Operations Management

**Session Chair:** Mohammed Baki, University of Windsor, Windsor, Ontario, Canada

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<tr>
<th>ID</th>
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<td>242</td>
<td>Standard Transformation Formulation Framework for Robust Optimization Technique with Application on Healthcare Delivery Systems</td>
<td>Morteza Lalmazloumian, Mohammed Baki and Majid Ahmadi, University of Windsor, Windsor, Ontario, Canada</td>
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<td>267</td>
<td>Composite Index Creation Using AHP: Efficiency Optimization for the Health Care Industry</td>
<td>Mohammed Baki and Andrea Yzeiri, University of Windsor, Windsor, Ontario, Canada</td>
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<td>288</td>
<td>Analysis of change management using SAP-LAP hills</td>
<td>Hari Krishnan Thampi and Pramod V R, Dept. of Mechanical Engineering, NSS College of Engineering Palakkad, India</td>
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<td>258</td>
<td>Econometric models for decision making in IT services</td>
<td>Joaquin Fernando Sanchez and Martha M Cuellar Cahves, San Mateo Eduacion superior, Bogota, Cundinamarca, Colombia</td>
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<td>327</td>
<td>Barriers of sharing tacit knowledge: A case of Gauteng agricultural SMMEs, South Africa</td>
<td>Charles Mbohwa and Lawrence Seseni, University of Johannesburg, South Africa</td>
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### Modeling and Simulation

**Session Chair:** Ali ElKamel, University of Waterloo, Ontario, Canada

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<td>162</td>
<td>Optimizing Cleaning Schedules of Heat Exchanger Networks</td>
<td>Mohamed Elsholkami, Ali ElKamel and Chandra Mouli Madhuranthakam, University of Waterloo, Waterloo, Ontario, Canada</td>
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<td>175</td>
<td>Interaction Frame Works and Supply Chain System Reliability</td>
<td>Sankar Sengupta and Deepa Sharma, Oakland University, Rochester, Michigan, United States</td>
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<td>240</td>
<td>A Binary Integer Programming Model for the Job Shop Scheduling Problem</td>
<td>Ahmed Azab, Mohammed Baki and Alejandro Vital Soto, Univeristy of Windsor, Windsor, Ontario, Canada</td>
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<td>262</td>
<td>A Combined Analytical and Simulation-Based Approach to WIP Improvement</td>
<td>Duane Shortt, Webasto Roof Systems, Clarkson, Michigan, United States</td>
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<td>160</td>
<td>Design optimization of an electrolytic hydrogen for the Sarnia-Lambton upgrader</td>
<td>Mohamed Elsholkami and Ali ElKamel, University of Waterloo, Ontario, Canada</td>
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### Engineering Education

**Session Chair:** Ibrahim Mustafa, Yanbu Industrial College, Royal Commission for Jubail and Yanbu, Saudi Arabia

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<td>042</td>
<td>Improving Quality of Technical Education by Quality Function Deployment (QFD)</td>
<td>Mohan Khond, Shrinivas Patil, Swapnil Sonawane, Chaltanya Shrishrimal and Aarti Bhattu, College of Engineering Pune, Maharashtra, India</td>
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<td>187</td>
<td>Applying Marching Band Concepts to Develop High Performing Teams</td>
<td>Thomas Seubert, R3D Consulting, Roseville, MI, United States</td>
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<td>271</td>
<td>Review on the research culture and management taking into account values of respect and cooperation.</td>
<td>Martha M Cuellar Cahves, San Mateo Eduacion superior, Bogota, Cundinamarca, Colombia</td>
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<td>332</td>
<td>Implementation of Problem-Based Learning (PBL) in Chemical Thermodynamics Course at the Yanbu Industrial College, Saudi Arabia</td>
<td>Ibrahim Mustafa, Yanbu Industrial College, Royal Commission for Jubail and Yanbu, Saudi Arabia</td>
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### CAE with Hypermesh Workshop

**DM Noor Ruhul Alam**  
Design Release Engineer  
General Motors Technical Center  
Warren, Michigan

### Lean Six Sigma Workshop

**Jayant Trewn**, ASQ Fellow, Ph.D.  
Lean Six Sigma Master Black Belt  
Performance Coach and Advisor
9:30 – 10:15 am: Saturday Morning Keynote:

Aaron Rubel
Engineering Lead - Cabin & Cargo Standard Parts, Flammability Certification, & Mass Properties, Certified Lean Six Sigma Black Belt
AIRBUS Americas Engineering, Inc.
A200 – Architecture Auditorium

10:15 – 11:00 am: Saturday Morning Keynote:

Dr. Srinivas Garimella
Leader - Additive Manufacturing Center of Excellence
Eaton Corporation, Southfield, Michigan
A200 – Architecture Auditorium

11:00 – 11:30 – Networking Break - Exhibition Hall

Session – Saturday (September 24): 11:30 am – 12:45 pm

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<th>11:30 – 12:45, SATURDAY</th>
<th>Global Engineering Education V</th>
<th>Room Eng. E200</th>
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<tbody>
<tr>
<td>Session Chair: Dr. Devdas Shetty, University of the District of Colombia</td>
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</table>

11:30 – 11:55:
Dr. Daw Alwerfalli
Professor and Director of Master of Engineering Management Program
A. Leon Linton Department of Mechanical Engineering
Lawrence Technological University
Southfield, Michigan, USA

11:55 – 12:20:
Dr. Devdas Shetty
Dean, School of Engineering and Applied Sciences
Professor of Mechanical Engineering
University of the District of Colombia
Washington DC, USA

12:20 – 12:45:
Dr. Mohammad Miftaur Rahman Khan Khadem
Assistant Professor
Department of Mechanical and Industrial Engineering
Sultan Qaboos University
Muscat, Oman

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<th>11:30 – 12:45, SATURDAY</th>
<th>Industry Solutions V</th>
<th>Room Eng. E201</th>
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<tr>
<td>Session Chair: Dr. Mehran Doulat, Razak School of Engineering and Advanced Technology, UTM Kuala Lumpur, Malaysia</td>
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11:30 – 11:55:
Foad Hosseinkhanli
Director of Quality Assurance, Performance and Business Improvement
Amor Health Services, Inc.
Brownsville, Texas, USA

11:55 – 12:20:
Mehran Doulat, BSc., MEM, MQM, EFQM, Ph.D.
Senior Research Fellow
Genichi Taguchi Center for Quality and Sustainability
Razak School of Engineering and Advanced Technology
UTM Kuala Lumpur, Kuala Lumpur, Malaysia

12:20 – 12:45:
Dr. Ishaq Hussain
Manufacturing Process Lead
General Motors Corporation
World Head Quarters, Pontiac, Michigan

© IEOM Society International
### 11:30 – 12:45, SATURDAY  
**Six Sigma**  
Room Eng. E202

**ID 177**  
**The Role of Technology in Outsourcing practices in Nigerian Oil and Gas Industry - Further Analysis**  
Nnamdi Ogbuke, University of Central Lancashire Preston UK, Preston, Lancashire, United Kingdom  
Yahaya Yusuf, Lancashire Business School, Lancashire, Preston, United Kingdom  
Jan Hewitt, School of Management, Lancashire, Preston, United Kingdom

**Session Chair:** Oviri Umude-Igbru, Aston University, Birmingham, United Kingdom

**ID 279**  
**Critical Success Factors for Successful Implementation of Six Sigma in Pakistani Industries**  
Zahid Abbass Shah, University of the Punjab, New Campus, Lahore, Punjab, Pakistan  
Asfa Muhammad Din, The University of Lahore, Lahore, Punjab, Pakistan

**ID 303**  
**Optimization of Thermal Profile Process in Assembly Line of Printed Circuit Boards (PCB) Using Design of Experiments**  
Kamal Alzameli and Daw Alwerfalli, Lawrence Technological University, Southfield, Michigan, USA  
Ahmed Alsamari, Product Devolvement Center, Ford Motor Company, Dearborn, Michigan, USA

**ID 137**  
**Perceptions of the Implementation of Lean Six Sigma: A case of the U.K. and Nigerian Manufacturing Industries**  
Oviri Umude-Igbru and Brian Price, Aston University, Birmingham, West Midlands, United Kingdom

### 11:30 – 12:45, SATURDAY  
**Production Planning and Management**  
Room Eng. E203

**Session Chair:** Ghorbanmohammad Komaki, Case Western Reserve University, Clevland, OH, United States

**ID 124**  
**Demand Forecasting for Strategic Resource Planning**  
Abdul Talib Bon, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

**ID 210**  
**Investigating the relationship between team-working and production agility in manufacturing organizations**  
Abbas Mahmoudabadi and Donya Nader, MehrAstan University, Astaneh-e-Ashrafieh, Gilan, Iran

**ID 223**  
**Intelligent integrated MRP, MPS and Detail Scheduling**  
Saf Uliah Khan, Huazhong University of Science and Technology, China

**ID 231**  
**Scheduling multi-objective unrelated parallel machines using hybrid reference-point based NSGA-II algorithm**  
Ghorbanmohammad Komaki and Behnam Malakooti, Case Western Reserve University, Cleveland, OH, United States

**ID 358**  
**An investigation into the dynamics of supply chain practices in Dairy industry: A Pilot Study**  
Arvind Bhardwaja, Rahul S Morb, Sarbijit Singhc and Manish Devd, Department of Industrial & Production Engineering, Dr BR Ambedkar National Institute of Technology, Jalandhar, Punjab, India

### 11:30 – 12:45, SATURDAY  
**Modeling and Simulation**  
Room Eng. E204

**Session Chair:** Duane Shortt, Webasto Roof Systems, Clarkston, Michigan, United States

**ID 275**  
**Integration of Renewable Energy into Oil & Gas Industries: Solar-aided Hydrogen Production**  
Chonnawee Likkasit and Hong-ming Ku, Thonburi, Bangkok, Thailand

**ID 161**  
**Design optimization of a microreactor for the production of biodiesel**  
Mohamed Elsholkami, Chandra Mouli Madhuranthakam and Ali Elkamel, University of Waterloo, Ontario, Canada

**ID 226**  
**Thermal Stress Analysis of Cyclic Braking In a Disc Brake**  
Asnaf Aziz, Sarhad University of Science and Information Technology, Peshawar, Pakistan

**ID 159**  
**Techno-economic analysis of a peatland gasification process for methanol synthesis and power production**  
Mohamed Elsholkami, Ali Elkamel and William Anderson, University of Waterloo, Ontario, Canada

**ID 263**  
**A Structured Simulation-Based Methodology of Batch Size Optimization to Minimize Unit Cost**  
Duane Shortt, Webasto Roof Systems, Clarkston, Michigan, United States

### 11:30 – 12:45, SATURDAY  
**Industry Best Practices**  
Room Eng. E205

**Session Chair:** Sankar Sengupta, Oakland University, Rochester, MI, United States

**ID 250**  
**An integrated MOEA and MCDM for Multi-Objective Optimization (Case study: control chart design)**  
Mohamad Amin Kaviani, Young Researchers and Elite Club, Shiraz branch, Islamic Azad University, Shiraz, Iran  
Elaheh Ghasemi, Aghigh Institute of Higher Education, Shahinshar, Isfahan, Iran

**ID 255**  
**Use of Quality Assurance in Manufacturing Mine Roof Bolts for a Platinum Mine: Case study**  
Charles Mbohwa and Ignatio Madanhire, University of Johannesburg, South Africa

**ID 044**  
**The Value of Stakeholders Analysis in the process of a Textile Company in Puebla State**  
César De La Luz and Maria de Los Angeles Gomez, Universidad Popular Autónoma del Estado de Puebla AC, Puebla, Mexico
ID 169  The Move It Forward Theory (MIFT) offers a better method to manage major machine failure in a serial flow line
Sankar Sengupta and William Edwards, Oakland University, Rochester, MI, United States

ID 304  Possibilities of sustainable transport in City of Johannesburg (CoJ) of South Africa
Sebonkile Thaba, University of Johannesburg, South Africa

11:30 – 12:45, SATURDAY  CAE with Hypermesh Workshop  Room Eng. E206
DM Noor Ruhul Alam
Design Release Engineer
General Motors Technical Center
Warren, Michigan

11:30 – 12:45, SATURDAY  Lean Six Sigma Workshop  Room Eng. E207
Jayant Trewn, ASQ Fellow, Ph.D.
Lean Six Sigma Master Black Belt
Performance Coach and Advisor

12:45 – 1:00 pm – Networking Break – Exhibition Hall – A210

1:00 pm SATURDAY LUNCH KEYNOTE:

Mr. John Fleming
Executive VP Manufacturing & Labor Affairs (retired)
Ford Motor Company
A200 – Architecture Auditorium (Boxed Lunch Provided)

2:00 – 2:30 pm Networking Break – Exhibition Hall – A210

Session – Saturday (September 24): 2:30 – 3:45 pm

2:30 – 3:45, SATURDAY  Global Engineering Education VI  Room Eng. E200
Session Chair: Dr. Srinivas R. Chakravarthy, Kettering University, Flint, Michigan, USA

2:30 – 2:55:
Dr. Srinivas R. Chakravarthy
Professor and Department Head
Industrial and Manufacturing Engineering
Kettering University
Flint, Michigan, USA

2:55 – 3:20:
Robert P. Van Til, Ph.D.
Pawley Professor of Lean Studies and Chair
Industrial and Systems Engineering Department
Oakland University
Rochester, Michigan, USA

3:20 – 3:45:
Dr. Leslie Monplaisir
Department Chair
Industrial and Systems Engineering
Wayne State University
Detroit, Michigan

2:30 – 3:45, SATURDAY  Industry Solutions VI  Room Eng. E201
Session Chair: Mohammad Hijawi, Fiat Chrysler Automobiles (FCA), Auburn Hills, Michigan

2:30 – 2:55:
Michelle (Matson) Hackett
CAD Production Manager
RGIS
Auburn Hills, Michigan
2:55 – 3:20:  
Mohammad Hijawi  
Technical Fellow – Powertrain Quality Reliability Engineering  
Chair – FCA US Technical Council  
Fiat Chrysler Automobiles (FCA)  
Auburn Hills, Michigan

3:20 – 3:45:  
Muhammad Arif Islam  
Functional Safety Manager  
Breaking Engineering  
ZF TRW  
Livonia, Michigan

2:30 – 3:45, SATURDAY  
Sustainable Manufacturing  
Room Eng. E202

Session Chair: Ali Mostafaeipour, Industrial Engineering Department, Yazd University, Yazd, Iran

ID 251  
Warranty Analysis of Remanufactured Electrical Products  
Wilkistar Otieno and Yuxi Liu, University of Wisconsin-Milwaukee, Milwaukee, WI, United States

ID 204  
Developing a System for Sustainable Product Design and Manufacture  
Devdas Shetty, University of the District of Columbia, United States

ID 118  
A Way Forward to Attain Lean Manufacturing Status through Transformational Leadership  
Syed Masood and Rafiullah Khan, International Islamic University, Islamabad, Pakistan  
Shahzad Qureshi, NUST College of E & ME Rawalpindi, Pakistan

ID 331  
The Use of Knowledge Management as A Sustainable Competitive Advantage in African Manufacturing Settings: An Architectural and Economic Analysis for 21st century  
Makhala Mpho Motebele, University of Johannesburg, South Africa

ID 337  
Evaluation of hydrogen production from wind turbines: A case study  
Ali Mostafaeipour, Industrial Engineering Department, Yazd University, Yazd, Iran  
Omid Alavi, Department of Electrical Engineering, K.N. Toosi University of Technology, Tehran, Iran

2:30 – 3:45, SATURDAY  
Project Management  
Room Eng. E203

Session Chair: Nihan Kabadayi, Business School of Istanbul University, Istanbul, Istanbul, Turkey

ID 168  
Importance of having a systematic approach for providing proactive communication about project key indicators & health during customer acquisition and product delivery life cycle  
M Dhanvijay and Nikhil Nazarkar, College of Engineering, Pune, India

ID 234  
Considering the time value of money for modeling the risk assessment of cost and time components in construction projects  
Abbas Mahmoudabadi, MehrAstan University, Astaneh, Gilan, Iran  
Roghaye Mousazade, Organization for Development, Renovation and equipping schools of Tehran Province, Tehran, Iran

ID 286  
A study on how to improve PMBOK guidelines performance by simulation Case Study: National Gas Company of Lorestan province  
Moslem Parsa and Fatemeh Jaferi, Lorestan Gas Company, Khorraramabad, Iran

ID 179  
Service Quality Analysis with Using a Fuzzy AHP Methodology: A case study in Veterinary Hospital in Turkey  
Nihan Kabadayi and Birgul Kucuk Cirpin, Business School of Istanbul University, Istanbul, Istanbul, Turkey

ID 298  
HIV/AIDS Humanitarian Supply Chain Management: The Case of Zimbabwe  
Charles Mbohwa and Tatenda Talent Chingono, University of Johannesburg, South Africa

2:30 – 3:45, SATURDAY  
Supply Chain Management and Logistics  
Room Eng. E204

Session Chair: Dr. Rashmi Jha, Gitarattan International Business School, Guru Gobind Singh Indraprastha University, New Delhi, India

ID 014  
Productivity Mapping for a Reverse Logistics Warehouse with n series and m Parallel Processes  
Anupam Tripathi, Flipkart Internet Pvt. Ltd., Bangalore, Karnataka, India  
Ashish Kumar Chaudhary, Flipkart, Bangalore, Karnataka, India  
Rohit Kunal, Flipkart, Bangalore, Karnataka, India

ID 163  
A Study on Japanese Automotive Firms and Managing Supply Chain Vulnerability  
Yacob Khojasteh, Graduate School of Global Studies, Sophia University, Tokyo, Japan  
Yasutaka Kainuma, Graduate School of System Design, Tokyo Metropolitan University, Tokyo, Japan

ID 188  
A Decision Support Model to Select Suppliers in Apparel Industry  
Deepthi Wickramaarachchi and Chami Keerthsinghe, University of Moratuwa, Colombo, Western province, Sri Lanka

ID 123  
Airport Connectivity Evaluation: The Study of Thailand  
Tipavinee Suwanwong and Apichat Sopadang, Chiang Mai University, Muang District, Chiang Mai, Thailand
2:30 – 3:45, SATURDAY  
**Data Analytics**  
Room Eng. E205

Session Chair: Abdullah Alrabghi, University of Jeddah, Saudi Arabia

**ID 158**  Factors That Explain the Propensity of a Customer to be Promoter of a Brand of Telecommunications Services  
Diego Jose Gomez Montoya, Manuela Beltrán University, Bogotá, Colombia

**ID 259**  Wastewater effluents & Optimizing Aeration Process  
Ali Asadi, Anoop Verma and Kai Yang, Wayne State University, Detroit, Michigan, United States

**ID 328**  Data Analytics and Visualization in Analyzing Mortality Records  
Md Noor-E-Alam and Mehul R Patel, Northeastern University, Boston, Massachusetts, United States

**ID 301**  Maintenance modelling: revisiting common assumptions  
Abdullah Alrabghi, University of Jeddah, Saudi Arabia

**ID 349**  An Assessment of Service Quality Delivery in Selected Local Authorities in Namibia  
Nestor Sheefeni, Faculty of Engineering, Namibia University of Science and Technology, Windhoek, Namibia  
Michael Mutingi, Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa and Namibia University of Science and Technology, Windhoek, Namibia

2:30 – 3:45, SATURDAY  
**CAE with Hypermesh Workshop**  
Room Eng. E206

DM Noor Ruhul Alam  
Design Release Engineer  
General Motors Technical Center  
Warren, Michigan

2:30 – 3:45, SATURDAY  
**Lean Six Sigma Workshop**  
Room Eng. E207

Jayant Trewn, ASQ Fellow, Ph.D.  
Lean Six Sigma Master Black Belt  
Performance Coach and Advisor

3:45 – 4:00 – Break

**Session – Saturday (September 24): 4:00 – 5:15 pm**

4:00 – 5:15, SATURDAY  
**Global Engineering Education VII**  
Room Eng. E200

Dr. Matthew Ohland  
Professor, School of Engineering Education  
Purdue University  
West Lafayette, Indiana, USA  
CATME SMARTER Teamwork

4:00 – 5:15, SATURDAY  
**Industry Solutions VII: Women in Industry and Academia**  
Room Eng. E201

Session Chair: Dr. Rashmi Jha, Guru Gobind Singh Indraprastha University, New Delhi, India

Dr. Galia Novakova  
Faculty of Mathematics and Informatics  
Sofia University, Bulgaria

Dr. Rashmi Jha  
Associate Professor and Program Coordinator of Master of Computer Applications  
Gitarattan International Business School  
Guru Gobind Singh Indraprastha University  
New Delhi, India

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

Ms. Priyadarshani Premarathne  
Lecturer, Department of Sociology  
University of Peradeniya  
Peradeniya, Sri Lanka
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<td>4:00 – 5:15, SATURDAY</td>
<td><strong>Manufacturing and Reliability</strong></td>
<td>Room Eng. E202</td>
<td>Yahaya Yusuf, Lancashire Business School, Lancashire, Preston, United Kingdom</td>
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<td>ID 046</td>
<td>Technical and economic impacts on different methods of improving the performance of a gas pipeline</td>
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<td>Amar Benmounah, University of Bourmerdes UMBB, Bourmerdes, Algeria</td>
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<td>ID 164</td>
<td>A guideline of quality steps towards Zero Defect Manufacturing (ZDM) in Industry</td>
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<td>Ragnhild Eleftheriadis and Odd Myklebust, SINTEF/NTNU, Trondheim, Norway</td>
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<td>ID 122</td>
<td>A new cell formation with part family clustering in cellular manufacturing system</td>
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<td>Iraj Mahdavi, Mazandaran university of Science and Technology, Babol, Mazandaran, Iran</td>
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<td>ID 237</td>
<td>Eco –industrial park framework development to enhance waste management: Case study</td>
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<td>Charles Mbohwa and Ignatio Madanahire, University of Johannesburg, South Africa</td>
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<td>ID 132</td>
<td>Calculate Layer Depth of Selective Laser Sintering Depending on Processing Time</td>
<td></td>
<td>Abass Enzi and James Mynderse, Lawrence Technological University, Southfield, MI, United States</td>
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<tr>
<td>4:00 – 5:15, SATURDAY</td>
<td><strong>Production Planning and Management</strong></td>
<td>Room Eng. E203</td>
<td>John Ikome, Tshwane University of Technology, Gauteng, South Africa</td>
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<td>ID 125</td>
<td>Modeling Analytical Hierarchy Process and Fuzzy Inference System Tsukamoto for Crude Palm Oil Production Planning</td>
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<td>Abdul Taibl Bon, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia</td>
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<td>ID 222</td>
<td>Multi-level Capacitated lot-sizing with Backlogging and Environmental Considerations</td>
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<td>Ahmed Azab, Nusrat Chowdhury and Mohammed Baki, University of Windsor, Ontario, Canada</td>
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<td>ID 320</td>
<td>A framework for sharing knowledge within SMMEs: A South African Study</td>
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<td>Charles Mbohwa and Lawrance Seseni, University of Johannesburg, South Africa</td>
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<td>ID 142</td>
<td>Using Simulation Modeling To Increase Throughput In The plants</td>
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<td>Ahad Ali, Abass Enzi and James Mynderse, Lawrence Technological University, Southfield, MI, United States</td>
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<td>ID 260</td>
<td>Advance Method of Re-scheduling after a Machine Breakdown. Case Study Ceramic Manufacturing Plant South Africa.</td>
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<td>John Ikome, Tshwane University of Technology, Gauteng, South Africa</td>
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<td>4:00 – 5:30, SATURDAY</td>
<td><strong>Inventory Management</strong></td>
<td>Room Eng. E204</td>
<td>Chandra K. Jaggi, University of Delhi, Delhi, India</td>
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<tr>
<td>ID 112</td>
<td>Study and Optimization of inventory of an Automobile showroom</td>
<td></td>
<td>Shailee Dalal, Pandit Deendayal Petroleum University, Vadodara Municpal City Limits, Gujarat, India</td>
</tr>
<tr>
<td>ID 126</td>
<td>Supply System Design of a Lubricant Distributor Company in Colombia</td>
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<td>Nelson Tovar, Universidad de Ibagué, Ibagué, Tolima, Colombia</td>
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<tr>
<td>ID 192</td>
<td>The Dynamic Research on High-speed Railway Seat Inventory Control</td>
<td></td>
<td>Fan Chengpeng, Wuhan, Hubei, China</td>
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<tr>
<td>ID 305</td>
<td>Sustainable enterprise development through strategic sourcing</td>
<td></td>
<td>Sebonkile Thaba, University of Johannesburg, Johannesburg, South Africa</td>
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<tr>
<td>ID 193</td>
<td>Optimal Ordering Policy for non-instantaneous deteriorating items with partially backlogged and stock dependent demand under two-warehouse storage facility</td>
<td></td>
<td>Chandra K. Jaggi, University of Delhi, Delhi, India</td>
</tr>
<tr>
<td>4:00 – 5:15, SATURDAY</td>
<td><strong>Entrepreneurship and Innovation</strong></td>
<td>Room Eng. E205</td>
<td>José G Vargas-hernández, University of Guadalajara, Zapopan, Jalisco, Mexico</td>
</tr>
<tr>
<td>ID 020</td>
<td>Open Innovation through Virtual Business Network: Perspective from Small and Medium Enterprises</td>
<td></td>
<td>AHM Shamsuzzoha, MMR Khan and Mahmoud Al Kindi, Sultan Qaboos University, Muscat, Oman</td>
</tr>
<tr>
<td>ID 141</td>
<td>NAV Smart Bike</td>
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<td>Navpreet Singh, CGC-College of Engineering, Mohali, Punjab, India</td>
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<tr>
<td>ID 166</td>
<td>A meta-analysis of electronic sensors applying in inventions of young students</td>
<td></td>
<td>Jon-Chao Hong and Chi-Ruei Tsai, National Taiwan Normal University, Taipei, Taiwan</td>
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<tr>
<td>ID 272</td>
<td>The Value of Intellectual Property and Challenges faced in the Implementation. Case Study SA</td>
<td></td>
<td>John Ikome, Tshwane University of Technology, Gauteng, South Africa</td>
</tr>
</tbody>
</table>
ID 330  Return Patterns and Restructuring of Distressed Manufacturing Firms: Smart Innovation Approach
Charles Mbohwa and Makhala Mpho Motebele, University of Johannesburg, South Africa

ID 037  Mergers, Acquisitions and Strategic Alliances in the Film Industry in Mexico
José G Vargas-hernández, University Center for Economic and Managerial Sciences, University of Guadalajara Zapopan, Jalisco, Mexico

4:00 – 5:15, SATURDAY  
CAE with Hypermesh Workshop  
Room Eng. E206

DM Noor Ruhul Alam  
Design Release Engineer  
General Motors Technical Center  
Warren, Michigan

4:00 – 5:15, SATURDAY  
Lean Six Sigma Workshop  
Room Eng. E207

Jayant Trewn, ASQ Fellow, Ph.D.  
Lean Six Sigma Master Black Belt  
Performance Coach and Advisor

7:00 – 10:00 pm (Saturday)  
CONFERENCE AWARD DINNER  
Rod Ridler Field House

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

IEOM Symposium on Lean Six Sigma  
Bogota Colombia, May 13, 2016  
Venue: Universidad del Rosario Campus

Symposium Chair:  
Sandra Milena Chacon Sanchez  
Director of Logistics and Production Program, Universidad del Rosario, Bogota, Colombia

Student Coordinator: Valeria Mendoza Cortes

IEOM Symposium on Lean Six Sigma, GD&T and Industrial Engineering Tools and Techniques  
Xiangtan, Hunan, China, August 2 - 4, 2016  

Theme: “The Challenge of Industrial Engineering and Operations Management for Sustainable Manufacturing and Service Systems in China”

Organized by: IEOM Society of China and IEOM Society International
September 25, 2016 (Sunday)

Session: 8:00 – 9:15 pm

08:00 – 09:15, SUNDAY    Global Engineering Education VIII    Room Eng. E200
Session Chair: Dr. Mukti M. Rana, Delaware State University, Dover, DE, USA

08:00 – 08:25:
Dr. Mukti M. Rana
Associate Professor and Chair
Department of Physics and Engineering &
Optical Science Center for Applied Research
Delaware State University
Dover, DE, USA

08:25 – 09:15: 50 min
Dr. Harun Rashid
Harun RashidDirector of Staff Mentoring and Coaching
Hamadeh Educational Services serving Star International Academy, Universal Learning Academy, Universal Academy, and Noor International
Academy
&
Adjunct Faculty
College of Education
Wayne State University
Detroit, Michigan, USA

08:00 – 09:15, SUNDAY    Industry Solutions VIII    Room Eng. E201
Session Chair: Gregg Young, Young Associates, Inc., Midland, MI

08:00 – 08:25:
Walter Schwartz
Sustainability & Business Strategy Supervisor
Ford Motor Company

08:25 – 08:50:
Bob Doering, MBA
Quality Engineering Professional
Expert in CorrectSPC for Precision Machining - Trainer, Consultant
Lagrange, Ohio

08:50 – 09:15:
Gregg Young
President and Founder
Young Associates, Inc.
Midland, MI

“Lost Secrets of the Origin of Six Sigma

08:00 – 09:15, SUNDAY    Quality and Reliability    Room Eng. E202
Session Chair: Petri Helo, University of Vaasa, Pohjanma, Finland

ID 233  Computer Aided Process Planning Software for Cost Reduction and Increase in Production Rate
Bhaskaran Gopalakrishnan and Omar Al-Shebeeb, West Virginia University, Morgantown, WV, United States

ID 270  Modeling and Optimization in a new Machining Production Line by using Manufacturing System Simulation
Khaleel Al ithawi, Lawrence Technological University, Southfield, MI, United States

ID 335  Quality Delivery Service as a Strategy: Profile and Perspectives for Excellence achievement within OPRAG
Jean-Prosper BeluEssimengane, Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa
Tawanda Mushiri, Faculty of Engineering, Department of Mechanical Engineering, University of Zimbabwe, Mt Pleasant, Harare, Zimbabwe
Charles Mbohwa, University of Johannesburg, Johannesburg, South Africa

ID 110  Cloud-based Virtual Supply Chain
AHM Shamsuzzoha, Sultan Qaboos University, Muscat, Oman
Petri Helo, University of Vaasa, Pohjanma, Finland
Maqsood Sandhu, Al Ain, United Arab Emirates

ID 345  Design of a cost optimized bench saw cutting machine for wood with automatic braking system
Tawanda Mushiri, Department of Mechanical Engineering, University of Johannesburg, South Africa
Fortune Masarakufa, Department of Mechanical Engineering, University of Zimbabwe, Mt Pleasant, Harare, Zimbabwe
Charles Mbohwa, Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa
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<tr>
<td>ID 040</td>
<td>Decision making with the analytical hierarchy process (AHP) for materials and design selection in the POPE lawn mower manufacturing for minimizing environmental impacts</td>
<td>Abbas Mohammed, University of South Australia, Adelaide, Modbury, Australia</td>
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<td>ID 111</td>
<td>Identification of Challenges Facing Public Construction Industry in Palestine</td>
<td>Ahmad Rashed, Nassar Stone, Hebron, West Bank, West Bank and Gaza, Hanan Taha, Engineering, Bethlehem, West Bank, West Bank and Gaza, Abd Al Fattah Shamleh, An-Najah National University, Nablus, West Bank, West Bank and Gaza</td>
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<td>ID 176</td>
<td>Development of a procurement decision support system to enhance construction project delivery – From claims management perspective</td>
<td>Olatunde Banwo, George Agyekum-Mensah and Andrew Arewa, Coventry University, Coventry, West-Midlands, United Kingdom</td>
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<td>ID 236</td>
<td>Collaborative Project Management and Governance with a Focus on Inter-Firm system Integration within the High Tech Industry.</td>
<td>Majid Baseer, Sardar University of Science and Information Technology, Peshawar, Pakistan</td>
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<td>ID 119</td>
<td>A survey on fuzzy mathematical programming models based on a new approach to fuzzy ordering</td>
<td>Hadi Nasseri, Babolsar, Mazandaran, Iran</td>
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<td>ID 134</td>
<td>Nonlinear Mathematical Solution for Quadratic Assignment Problem: Real-World Application of Turkish Airforce Academy's Master Plan</td>
<td>Timur Keskinturk, Istanbul University, School of Business, Istanbul, Marmara, Turkey, Abdullah Emir Barkin, Turkish Airforce Academy, Istanbul, Marmara, Turkey, Kerem Karakaya, Turkish Airforce Academy, Istanbul, Marmara, Turkey</td>
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<td>ID 171</td>
<td>Modifying a Multi-Objective Genetic Algorithm Method for Active Sonar Clutter Reduction using Real-World Data</td>
<td>Mark Gammon, Defence R&amp;D Canada Atlantic Research Centre, Halifax, NS, Canada</td>
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<td>ID 184</td>
<td>An optimization model for scheduling emergency operations with multiple teams</td>
<td>Behrooz Bodaghi and Palaneeswaran Ekambaram, Swinburne University of Technology, Hawthorn, Victoria, Australia</td>
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<tr>
<td>ID 283</td>
<td>Composite Desirability Function (CDF) Approach for Evolutionary Algorithm Parameter Tuning</td>
<td>Mohammad Komaki, Case Western Reserve University, Cleveland, OH, United States</td>
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<td>ID 002</td>
<td>Save water; save our next generation</td>
<td>Jahangir Alam, Comfit Composite Knit Ltd., Mirzapur, Tangail, Bangladesh</td>
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<tr>
<td>ID 016</td>
<td>Simulation-Aided Production and Operations for Food and Beverage Plants</td>
<td>Vincent Bechard, SNC-Lavalin, Montreal, Quebec, Canada</td>
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<td>ID 185</td>
<td>Investigating the Effectiveness of SMS Marketing in Increasing the Sale of Insurance in the Bank Branches (A Case Study)</td>
<td>Afshan Roshani, Western New England University Springfield, MA, United States, Zahra Daneshfar, Allameh Tabataba’i University, Tehran, Iran, Hamid Sabzali, Tehran Azad University, Tehran, Iran</td>
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<tr>
<td>ID 249</td>
<td>System Architecture Design and Implementation of Trading Technology in one of the brokerage company in the Philippines</td>
<td>Maricar Navarro and Bryan Navarro, Technological Institute of the Philippines, Quezon City, NCP, Philippines, Mary Grace Benignos, I.T. Interaction Philippines, Angono, Rizal, Philippines</td>
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<tr>
<td>ID 257</td>
<td>Performance Evaluation using Balanced Scorecard (BSC) and Fuzzy TOPSIS technique Case Study: National Iranian Gas Company</td>
<td>Moslem Parsa, Fatemeh Jaferi and Meysam Biranvand, Lorestan Gas Company, Khorraramabad, Iran</td>
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<tr>
<td>ID 041</td>
<td>A case study on implementing lean ergonomic manufacturing systems (LEMS) in an automobile industry</td>
<td>Srinivasa Rao, National Institute of Technology, Jamshedpur, Jharkhand, India, Malay Niraj, National Institute of Technology, Jamshedpur, Tatanagar, Jharkhand, India</td>
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<tr>
<td>ID 247</td>
<td>Design and Implementation of a Database for Safety and Ergonomics in Engineering Research Labs</td>
<td>Faisal Aqlan, Penn State Behrend, Erie, PA, United States</td>
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<tr>
<td>ID 038</td>
<td>Lean manufacturing and socio-technical and ergonomics practices implementation</td>
<td>Carlos Emanu Fries, Guilherme Tortorella, Lizandra Lupi Vergara and Evelise Pereira Ferreira, Federal Univ. of Santa Catarina, Florianopolis, Brazil</td>
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© IEOM Society International
Session – Sunday (September 25): 9:30 – 11:00 am

9:30 – 10:15 am - Sunday Morning Keynote:

**Dr. Helmuth Ludwig**
Executive VP, Digital Enterprise Realization & Chief Manufacturing Officer
Siemens PLM Software
A200 – Architecture Auditorium

10:15 – 11:00 am - Sunday Morning Keynote:

**Richard D. Shainin**
Executive Vice President
Shainin, The Red X Company
Washington, D.C.
A200 – Architecture Auditorium

11:15 – 11:45 am Sunday Morning Keynote:

**Jd Marhevko**
Vice President of Quality, Lean and EHS Systems
Accuride Corporation
A200 – Architecture Auditorium

Session – Sunday (September 25): 11:30 am – 12:45 pm

11:45 am – 12:15 am Keynote

**Dr. Kai Yang**
Professor, Department of Industrial and Systems Engineering and
Director, Healthcare Systems Engineering Group
Wayne State University, Detroit, Michigan
A200 – Architecture Auditorium

12:15 – 12:45 Keynote

**Prabhu Patil**
President and CEO
Prolim Corporation
Dallas/Fort Worth, Texas
A200 – Architecture Auditorium
1:00 pm **Sunday Lunch Keynote**

**Steven Sibrel**

Senior Supplier Quality Manager  
Harman International, Novi, Michigan, USA  
and  
Chair - ASQ Greater Detroit

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14:00 – Networking Break – Exhibition Hall – A210

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**Session – Sunday (September 25) – 2:30 – 3:45 pm**

**Global Engineering Education IX**  
Room Eng. E200

Session Chair: Dr. Mohammad Rahman, Central Connecticut State University

2:30 – 2:55:

**Dr. Jamal Bari**  
Associate Professor  
Coordinator of Electronic Engineering Technology  
School of Engineering Technology  
Eastern Michigan University  
Ypsilanti, Michigan

2:55 – 3:20:

**Dr. Jacqueline Chestnut**  
Adjunct Professor  
Industrial and Systems Engineering Department  
College of Engineering  
North Carolina A&T State University  
Greensboro, NC, USA

3:20 – 3:45:

**Dr. Mohammad Rahman**  
Assistant Professor  
Manufacturing and Construction Management Department  
Central Connecticut State University  
New Britain, CT, USA

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**Industry Solutions IX**  
Room Eng. E201

Session Chair: Ahmed Al-Jabr, Saudi IEOM Society, Dhahran, Saudi Arabia

2:30 – 2:55:

**Abdul Talib Bon and Silvia Firda Utami**  
Department of Production and Operations Management  
Universiti Tun Hussein Onn Malaysia  
Johor, Malaysia

**Sukono**  
Department of Mathematics, Faculty of Mathematics and Natural Sciences  
Universitas Padjadjaran  
Bandung, Indonesia

2:55 – 3:20:

**Ahmed Al-Jabr, CMBB**  
President, Saudi IEOM Society  
Dhahran, Saudi Arabia

3:20 – 3:45:

**Ishak Zaman**  
Product Development Engineer  
Ford Motor Company
## IEOM Detroit Conference

### TECHNICAL PROGRAM

**September 23-25, 2016**

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<td>2:30 – 3:45, SUNDAY</td>
<td>e-Business and Information Technology</td>
<td>Room Eng. E202</td>
<td>Buddhika Ranaweera, Anuradhapura, Sri Lanka</td>
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<td>ID 246</td>
<td>Predict the Click-Through-Rate and Average Cost-Per-Click for Keywords Using Machine Learning Methodologies</td>
<td></td>
<td>Lihui Shi, Centerfield Corporation, El Segundo, California, United States</td>
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<td>ID 265</td>
<td>Social Media Marketing: A Scientific Framework</td>
<td></td>
<td>Seyed Mohammad Jafar Jalali and Mohammad Taghi Taghavifard, Tehran, Iran</td>
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<td>ID 019</td>
<td>Applying Technology to Educational Delivery and Its Management: Lesson from Nigeria</td>
<td></td>
<td>Todowede Babatunde Joel, Lagos State University, Ojo - Lagos Nigeria, Ojo, Lagos, Nigeria</td>
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<tr>
<td>ID 035</td>
<td>Demographic influences on the adoption and use of e-government services in Sri Lanka</td>
<td></td>
<td>Buddhika Ranaweera, Anuradhapura, Sri Lanka</td>
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<td>ID 348</td>
<td>A Service Quality Assessment of Internet Banking of Commercial Banks in Namibia in the Absence of Face to Face Encounter</td>
<td></td>
<td>Johannes Mutesi, Faculty of Engineering, Namibia University of Science and Technology, Windhoek, Namibia</td>
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<tr>
<td>ID 048</td>
<td>Analytical and experimental analysis for comparison of performance characteristics of catalytic converters including simulation</td>
<td></td>
<td>Mohan Khond and Dhiraj Gore, College of Engineering Pune, Maharashtra, India</td>
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<tr>
<td>ID 186</td>
<td>Enabling the Future of Energy &amp; Environment</td>
<td>Liang Downey, IEEE Technology Engineering Management Society, Southfield, MI, United States</td>
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<tr>
<td>ID 299</td>
<td>Social LCA, for sustainable bio-gas production by the city of Johannesburg</td>
<td>Charles Mbohwa and Tendata Talent Chingono, University of Johannesburg, South Africa</td>
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<td>ID 344</td>
<td>Design of a paper slitting and rewinding machine for a developing country, Zimbabwe</td>
<td>Tawanda Mushiri, Department of Mechanical Engineering, University of Johannesburg, Johannesburg, South Africa</td>
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<td>Godfrey Mashana, Department of Mechanical Engineering, University of Zimbabwe, Mt Pleasant, Harare, Zimbabwe</td>
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<td>Charles Mbohwa, Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa</td>
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<tr>
<td>2:30 – 3:45, SUNDAY</td>
<td>Healthcare Systems</td>
<td>Room Eng. E204</td>
<td>Faisal Aqlan, Penn State Behrend, Erie, PA, United States</td>
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<tr>
<td>ID 241</td>
<td>Process Improvement Approach to Investigate Low Block Utilization of Operating Rooms: A Case Study</td>
<td></td>
<td>Omar Ashour, Faisal Aqlan and Anne Pedersen, Penn State Behrend, Erie, PA, United States</td>
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<tr>
<td>ID 261</td>
<td>A new individual patient centric demand forecasting method.</td>
<td>Sankar Sengupta, Oakland University, Rochester, MI, United States</td>
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<td>ID 266</td>
<td>Healthcare Delivery Framework for Urgent Care at Home</td>
<td>Md Noor-E-Alam, Tasnim Ibn Faiz and Ali Al-Muflih, Northeastern University, Boston, Massachusetts, United States</td>
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<td>ID 316</td>
<td>Increased efficiency of the dispensing of the surgery room pharmacy</td>
<td>Valeria Mendoza Cortes, Eliana Acuña and Victor Garcia, Universidad Del Rosario, Bogotá, Colombia</td>
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<tr>
<td>ID 248</td>
<td>Lean Process Improvement of First Case Scheduling in Operating Rooms</td>
<td>Faisal Aqlan, Omar Ashour and Anne Pedersen, Penn State Behrend, Erie, PA, United States</td>
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<td>2:30 – 3:45, SUNDAY</td>
<td>Financial Engineering</td>
<td>Room Eng. E205</td>
<td>Abdul Talib Bon, Universiti Tun Hussein Onn Malaysia</td>
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<td>ID 036</td>
<td>Defining authentication method of financial software applications by analysing user activities history</td>
<td>S.M. Tofayel Ahmad and Prakash Chandra Mondal, Bangladesh Bank (The Central Bank of Bangladesh), Dhaka, Bangladesh</td>
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<td>ID 214</td>
<td>The APT with Lagged, Value-at-Risk and Asset Allocations by Using Econometric Approach</td>
<td>Sukono and Sudradjat Supian, Department of Mathematics, Padjadjaran University, Bandung, Indonesia</td>
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<td>ID 217</td>
<td>Comparison between the Models of GARCH and EGARCH in Predicting the Change of Composite Stock Price Index</td>
<td>Endang Soeryana hasbullah, Sukono, and Sudradjat Supian, Department of Mathematics, Padjadjaran University, Bandung, Indonesia</td>
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<td>ID 296</td>
<td>Drilling Rig Selection and Cost Analysis: a Comparison of Top Drive and Rotary Table Drilling Systems</td>
<td>Walid M. Mahmud and Saber Kh. Elmabrouk, Petroleum Engineering Department, Faculty of Engineering, University of Tripoli, Tripoli, Libya</td>
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</table>
ID 341  Economical evaluation of passive systems for residential buildings in Kerman, Iran  
Ali Mostafaeipour, Industrial Engineering Department, Yazd University, Yazd, Iran  
Hossein Goudarzi, School of Architecture and Environmental Design, Iran University of Science and Technology, Tehran, Iran

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<td>Professor Donald M. Reimer</td>
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<td>College of Engineering</td>
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<td>Lawrence Technological University, Southfield, USA</td>
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<tr>
<td>2:30 – 3:45, SUNDAY</td>
<td>Lean Six Sigma Workshop</td>
<td>Eng. E207</td>
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<td>Jayant Trewn, ASQ Fellow, Ph.D.</td>
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<td>Lean Six Sigma Master Black Belt</td>
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<td>Performance Coach and Advisor</td>
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3:45 – 4:00 pm - Break

**Session – Sunday (September 25) – 4:00 – 5:15 pm**

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<td>Global Engineering Education X</td>
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<td>Session Chair: Dr. Zakaria Mahmud, Lake Superior State University, Sault Sainte Marie, Michigan</td>
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<tr>
<td>4:00 – 4:25:</td>
<td>Quamrul Mazumder, Ph.D., P.E.</td>
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<td>Associate Chair and Associate Professor</td>
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<td></td>
<td>Department of Mechanical Engineering</td>
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<td>University of Michigan – Flint</td>
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<td>4:25 – 4:50:</td>
<td>Dr. Walton Hancock</td>
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<td></td>
<td>Professor Emeritus Industrial and Operations Engineering and</td>
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<td>Professor Emeritus of Health Services, Management and Policy</td>
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<td>University of Michigan</td>
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<td>Ann Arbor, MI, USA</td>
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<tr>
<td>4: 50 – 5:15:</td>
<td>Dr. Zakaria Mahmud</td>
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<td></td>
<td>Associate Professor, Mechanical Engineering</td>
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<td>Lake Superior State University</td>
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<td>Sault Sainte Marie, Michigan</td>
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<td>Eng. E201</td>
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<td>Session Chair: Dr. Taufiquil Islam, IEOM Society International, Michigan</td>
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<td>4:00 – 4:25:</td>
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ID 292 Improving the Management of Operations at the “Office des Ports et RAdes du Gabon” (OPRAG). The road to achieve and sustain Quality Service delivery.
Charles Mbohwa and Jean Prosper Belui Essimengane, University of Johannesburg, South Africa
Tawanda Mushiri, University of Zimbabwe, Zimbabwe

ID 295 Reservoir Management Strategies for Development of Water Injection Planning Project
Saber Elmabrouk and Walid Mahmoud, University of Tripoli, Libya

ID 315 Supply Chain Resilience Assessment: A Grey Systems Theory Approach
Mohamad Amin Kaviani, Young Researchers and Elite Club, Shiraz branch, Islamic Azad University of Shiraz, Iran
Mohammad Sadegh Mobin, Western New England University, Springfield, MA, United States
Eleonora Bottani, Department of Industrial Engineering, University of Parma, Parma, Italy

ID 310 Reliability Engineering Management in the Petrochemical Environment: The Air Separation Unit
Arness Telukdarie and Richter Stadler, University of Johannesburg, Johannesburg, South Africa

ID 334 Knowledge Retention and Stabilisation within OPRAG: A Management must for the Excellence achievement.
Jean-Prosper Belui Essimengane, Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa.
Tawanda Mushiri, Faculty of Engineering, Department of Mechanical Engineering, University of Zimbabwe, Mt Pleasant, Harare, Zimbabwe
Charles Mbohwa, University of Johannesburg, Johannesburg, South Africa

ID 308 Sustainable Power Generation Pathways in Malaysia: Development of Long-range Scenarios
Md. Mizanur Rahman and Mohamed Syahril Nazreen Samsudin, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia

ID 350 Investigation of using Solar Energy: A Case Study
Ali Mostafaeipour and Mojtaba Qolipour, Industrial Engineering Department, Yazd University, Yazd, Iran

ID 300 Study on regulations, policies and permits for implementation of bioenergy systems
Charles Mbohwa and Tatenda Talent Chingono, University of Johannesburg, South Africa

ID 302 Socio-economic challenges within transport sector hindering sustainable transport in City of Johannesburg
Sebonkile Thaba, University of Johannesburg, South Africa

ID 326 Optimisation in Cutting Down Parameters for Industrial Bamboo
Hari Agung Yuniarto, Industrial Engineering, Universitas Gadjah Mada Slemank, D. I. Yogyakarta, Indonesia

ID 336 Effect of reducing the accuracy of wind speeds on distribution functions: A case study
Ali Mostafaeipour, Industrial Engineering Department, Yazd University, Yazd, Iran
Omid Alavi, Department of Electrical Engineering, K.N. Toosi University of Technology, Tehran, Iran

ID 340 Controlling Ground Vehicle Nonlinear Dynamics by the Use of Automobile Traction Models
Mohammed Alghassab, Amr Mahmoud and Mohamed A. Zohdy, Electrical and Computer Engineering Department, Oakland University, Rochester, MI 48309, USA

ID 341 Economical evaluation of passive systems for residential buildings in Kerman, Iran
Ali Mostafaeipour, Industrial Engineering Department, Yazd University, Yazd, Iran
Hossein Goudarzi, School of Architecture and Environmental Design, Iran University of Science and Technology, Tehran, Iran

ID 342 Using Wind Turbines for Hydrogen Production: A Case Study
Ali Mostafaeipour, Industrial Engineering Department, Yazd University, Yazd, Iran
Omid Alavi, Department of Electrical Engineering, K.N. Toosi University of Technology, Tehran, Iran

ID 346 Design of an automatic tyre pressure inflation system for small vehicles
Tawanda Mushiri, Department of Mechanical Engineering, University of Johannesburg, South Africa
Allan T. Muzhanje, Department of Mechanical Engineering, University of Zimbabwe, Mt Pleasant, Harare, Zimbabwe
Charles Mbohwa, Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa

ID 357 Effective Utilization of Implementing TPM in Saudi Arabian Companies
Ahmed Aljabr, Lawrence Technological University, Southfield, Michigan, USA
IEOM Detroit Conference  TECHNICAL PROGRAM  September 23-25, 2016

4:00 – 5:15, SUNDAY  OPEN  Room Eng. E205

4:00 – 5:15, SUNDAY  Entrepreneurial Mindset: Opportunity Recognition  Room Eng. E206

Professor Donald M. Reimer
College of Engineering
Lawrence Technological University, Southfield, Michigan, USA

4:00 – 5:15, SUNDAY  Lean Six Sigma Workshop  Room Eng. E207

Jayant Trewn, ASQ Fellow, Ph.D.
Lean Six Sigma Master Black Belt
Performance Coach and Advisor

Posters

ID 015  AgiFlex System: An Approach towards Unification of Agility and Flexibility Dimensions from Manufacturing Perspective
Abid Ali, Wasim Ahmad and Zahid Rashid, University of Engineering and Technology Taxila, Taxila, Punjab, Pakistan

ID 018  Slack Variable Approach for Mixture Experiment
Javier Cruz-Salgado, Silao, Guanajuato, Mexico

ID 138  FMI based Co-Simulation Framework to enable timing verification in Cyber-Physical Systems
Jonathan Latorre, The George Washington University, United States

ID 173  Controlling Ground Vehicle Nonlinear Dynamics by the Use of Automobile Traction Models
Mohammed Alghassab, Oakland University, Rochester Hills, Michigan, United States

ID 182  State of the Art of Semantic Web
Ali Alqaazaz, Oakland University, Rochester Hills, Michigan, United States

ID 189  Application of Balanced Scorecard in the Libyan Construction Industry
Abdussalam Shibli, Coventry University, Coventry, United Kingdom
Nawal Gherbal, Coventry University, Coventry, United Kingdom

ID 190  Fault Tree Analysis of Hazardous Conditions and Near Misses in a Company: A Case Application
Mehmet Savsar and Mohamed Al-Ali, Kuwait University, Safat, Kuwait

ID 207  Stochastic Hierarchical Approach for Master Surgical Scheduling
Justin Britt, Ahmed Azab and Mohammed Baki, University of Windsor, Windsor, Ontario, Canada

ID 218  Wasserstein distance and the distributionally robust TSP
Mehdi Behroozi, University of Minnesota-Twin Cities, United States
John Carlsson, University of Southern California, Los Angeles, California, United States

ID 232  Applications of Lean Methodologies and Quality Improvement in Textile Industry
Ahmad Yame, Lawrence Technological University, Southfield, MI, United States

ID 285  Min-Max Appointment Scheduling Problem
M. Fazle Baki and Silvi Qemo, University of Windsor, Windsor, Ontario, Canada

ID 306  Optimizing Corrosion Protection of Stainless Steel 304 by Epoxy-Graphene Composite using Factorial Experimental Design
Hesham Alhumadeh, Aiping Yu, Ali Elkamel, Leonard Simon, University of Waterloo, Ontario, Canada

ID 307  Neural Network Viscosity Models for Multi-Component Liquid Mixtures
Adel Elneihoum, Hesham Alhumadeh, Ibrahim Alhajri, Walid El Garwi, Ali Elkamel, University of Waterloo, Ontario, Canada

ID 309  Design and Optimization of a CO2 Pipeline Network for the Province of Alberta
Ali Elkamel, Basil Khan, Emmanuel Ikhide, Manuel Tejeda, Mosopefoluwa Cole, Alaa Alalawi, Hesham Alhumadeh, University of Waterloo, Ontario, Canada

ID 371  Engineering Postgraduate Students' Perspective on Their Preparedness for the Job Market: Employability Attributes
Chee-Ming Chan, Centre for Graduate Studies, Universiti Tun Hussein Onn Malaysia, Johor, Malaysia
Meeting Rooms Layout – Map of Lawrence Tech

All Keynotes in Architecture Auditorium – A200
Registration and Exhibition - Architecture Building – A210
All Technical Sessions - 2nd Floor of Engineering Building

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<th>E206 (Workshops)</th>
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<td>E201 (Industry Solutions)</td>
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<td>E205</td>
<td>E207 (Workshops)</td>
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GD&T Workshop in Lear Auditorium (T429)
Architecture Building (Entrance from 3rd and 4th Floor)

Conference Award Dinner
Saturday, 7:00 – 10:00 pm
Venue: Don Ridler Field House
(Near Civic Drive, North Side of the Campus)
Exhibitors

24/7 Access – Take the course when it’s convenient for you

Student Forum you can access 24/7 to work with other students

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IEOM Student Chapters

IEOM Student Chapter can help students in the development or enhancement of their important skills, including: leadership, communications, organization, planning, time management, budgeting, and finance, and other professional skills. Those can help to prepare for their career and to be successful in longer term. If any student group of any educational institute is interested to form an IEOM Student Chapter, please submit chapter establishment form. Contact: info@ieomsociety.org.

Suggested Student Chapter Activities

Workshops and Seminars – The chapter can sponsor workshops and seminars that focus on industrial engineering and operations management. Panel discussions featuring subject matter experts could be featured by industry segments: manufacturing, health, hospitality, education, chemical and plastic, food processing, etc.

Industry Speakers – Chapters could sponsor events in which experienced industrial engineers and operations managers present current issues faced by industry. This may also provide an opportunity for chapters to engage their alumni. This type of an event can also provide an opportunity to network and learn about potential employment.

Plant Tours – Chapter members should participate in various industry plant visits. This activity will expose students to industrial engineering and operations management in faced by industry and organizations.

Communication Development – Chapter may consider an activity that focuses on professional communication development – oral and written. Effective communication skills are an important success factor in the engineering and management disciplines. Enhancing the communication skills of chapter members adds value to their membership and their future.

Career Development – The chapter should also focus on career development by reaching out to Industrial Engineering and Operations Management alumni who can provide ideas and tips on engaging employers. Industry human resources managers also may provide insight into the career opportunities. The chapter should also promote the value of internships and co-ops.

Networking – The chapter should do everything possible to encourage its members to build a network of individuals who may be able to assist in opening doors in the future. These contacts are critical to the long term growth and career success.

Poster and Paper Contest – Chapter can sponsor a poster contest that has an industrial engineering and operations management focus. Posters provide an opportunity to display senior design projects and as well as research. The chapter can encourage students to write papers that may be presented in the Annual International IEOM Conference.

Fund Raising – Chapters should engage in fund raising activities including picnic and outdoor activities. This is necessary to support the various chapter events.

Membership Building – Chapters must continue to recruit new members. The IEOM Society will recognize the outstanding chapter membership growth each year at its annual conference.

Community Outreach – Chapters should consider an activity that focuses on professional communication development – oral and written. This activity could focus on high school students. In addition, the members of the chapter could provide industrial engineering consulting to not-for-profit organizations.

Alumni Relations – Chapter should considering establishing an alumni IEOM chapter. It is important to maintain and build relationship with alumni.

IEOM Professional Chapters

Australian IEOM Society  IEOM Society of Costa Rica  IEOM Society of Greece
Saudi Arabian IEOM Society  IEOM Society of China  IEOM Society of Canada
IEOM Society of Bangladesh  IEOM Society of Morocco  IEOM Society of Michigan
Nigerian IEOM Society  IEOM Society of Oman  IEOM Society of Virginia
IEOM Society of Malaysia  IEOM Society of Bulgaria  IEOM Society of Colombia
IEOM Society of Indonesia  IEOM Society of Costa Rica  IEOM Society of Greece

Establish Your Institution IEOM Student Chapter: Visit IEOM Website: www.ieomsociety.org

IEOM Student Chapters around Globe

1. Ahsanullah Univ. of Science & Technology, Dhaka, Bangladesh
2. Akhawayn University, Morocco
3. Babylion University, Iraq
4. College of Engineering Guindy (Anna University), Chennai, India
5. Islamic University of Technology (IUT), Bangladesh
6. Jessore University of Science and Technology, Bangladesh
7. Kathmandu University, Nepal
8. Khulna University, Bangladesh
9. Khulna University of Engineering and Technology, Bangladesh
10. King Abdulaziz University, Saudi Arabia
11. Lawrence Technological University
12. Mehran Univ. of Engineering and Tech., Jamshoro, Sindh, Pakistan
13. National Univ. of Science and Technology in Windhoek, Namibia
14. Pandit Dendayal Petroleum University, Ahmedabad, Gujrat, India
15. Sultan Qaboos University, Oman
16. Tribhuvan University, Nepal
17. Universiti Utara Malaysia
18. University of Costa Rica
19. University of Indonesia
20. University of Peradeniya, Sri Lanka
21. Vellore Institute of Technology, India
22. Vidya Jyothi Institute of Technology, Hyderabad, India

Join IEOM Society - Be a Professional or Student Member

MEMBERSHIP BENEFITS
• Be part of the Diverse Industrial Engineering (IE) and Operations Management (OM) Profession
• Professional Development
• Access IEOM Publications

• IEOM Newsletters
• Access IEOM Online Resources
• Networking Opportunities
• Conferences and Seminars
• Career and Leadership Development

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Distinguished Speakers – Industry Solutions

Friday, September 23, 2016

Session I: Industry Solutions
Room Engineering Building E201, 8:00 – 9:15 am (Friday)
Session Chair: Joe LaRussa, Brose Group, Auburn Hills, Michigan

08:00 – 08:25 (Friday)

Joseph J. LaRussa, PE
Industrial Engineering Manager - Drives
Brose North America, Inc.
Auburn Hills, Michigan, USA

Joe LaRussa is a registered professional engineer in the State of Michigan with diversified experience in product development, manufacturing engineering, and project management. He is personally responsible for over $2.5M in financial benefit to his employers, and is currently responsible for Industrialization and Manufacturing Engineering for the Drives Business in North America at Brose, a global supplier of automotive mechatronic systems. In this role Joe leads a regional team in the planning and realization of industrialization projects, manufacturing business planning, and manufacturing technology road mapping. Joe is a member of SAE International and the Society of Manufacturing Engineers (SME), and Joe has served in other volunteer leadership roles at his alma mater, the University of Michigan-Dearborn, and NorthRidge Church in Plymouth.

08:25 – 08:50 (Friday)

Paul Ryznar
Founder, President and CEO
OPS Solutions
Novi, Michigan

Engineer, inventor and entrepreneur Paul Ryznar created Light Guide Systems and is the founder, president and CEO of Novi, Mich.-based OPS Solutions. Prior to Light Guide Systems’ invention in 2005, he held senior management roles at Detroit Diesel and Bosch, as well as vice president of production technology at Energy Conversion Devices—more than 30 years of manufacturing experience.

Light Guide Systems uses proprietary software and high-powered projector systems to guide and confirm completion of complex tasks. From assembly to quality control to training, this technology provides the visualization, traceability and flexibility demanded by leading companies worldwide. Ryznar and his team have implemented systems in leading automotive manufacturers (including Fiat-Chrysler Group, Daimler AG and Johnson Controls) as well as for applications in aerospace, heavy equipment and health sciences.

Ryznar earned both an engineering degree (BSME) and an MBA from the University of Michigan.

08:50 – 09:15 (Friday)

Ahmad Rashed
Faculty of Engineering and Faculty of Graduated studies
An Najah National University
Nablus, Palestine

Palestinian Construction Sector

Session II: Industry Solutions
Room Engineering Building E201, 2:30 – 3:45 pm (Friday)
Session Chair: Foad Hosseinkhanli, Amor Health Services, Inc., Brownsville, Texas, USA

2:30 – 2:55 (Friday)

Edly Ferdin Ramly
Certification Director
EFR Certification
Johor Bahru, Malaysia

Operational Diagnosis - Application of Balance Scorecard and Value Stream Mapping to identify operational improvement opportunities

Abstract: Organizations need to diagnose their current operation performance and identify the opportunities for improvement in order to stay competitive. Based on literature, the common operational diagnosis approaches to identify operational improvements opportunities are: 1) Quality Audit; 2) Business Excellence Assessment; and 3)
Project Selection for Lean and Six Sigma. While Balance Scorecard (BSC) and Value stream Mapping (VSM) are powerful tools in operation management. Both of the tools have been utilized in operational diagnosis. The presentation provides the case studies in integration approaches to apply BSC and VSM in operational diagnosis to identify operational improvement opportunities in quality auditing, and BE Assessment.

Biography: Presently Mr. Edly is Certification Director and Lead Auditor for various certification schemes including ISO/TS16949. Apart from auditing, he is currently providing Lean, Business Excellence, Quality (ISO9001 and ISO/TS16949), Environment (ISO14001) and Safety (OHSAS18001) management system related consultancy, research and trainings to local and multi-national companies that seek operational improvement and breakthrough. His industrial experience was in the automotive industry is; Master of Business Administration Management System, he was invited by Malaysia Productivity Corporation (MPC) and Asia Productivity Organization (APO) to conduct training in the area of Lean and Six-Sigma implementation. Mr. Edly Ramly graduated from University of Bradford, UK with Bachelor Degree in Manufacturing System with Management. He then furthered his studies at Sheffield Hallam University, UK and awarded with a Master Degree of Science in Engineering with Management.

2:55 – 3:20 (Friday)

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

To control TDS (total dissolved solid) in discharge water of Dyeing

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.

3:20 – 3:45 (Friday)

Foad Hosseinkhanli
Director of Quality Assurance, Performance and Business Improvement
Amor Health Services, Inc.
Brownsville, Texas, USA

Failure Mode and Effect Analysis: A Lean Six Sigma Approach

Mr. Hosseinkhanli is Director of Quality Assurance, Performance and Business Improvement Amor Health Services, Inc. in Brownsville Texas USA. He was General Manager of Almana Trading in Doha Qatar Middle East and responsible for all aspects in creation and implementing of successful growth of new market development and turn- key operation for various products. Mr. Hosseinkhanli was involved with financial negotiation with national and international banking, corporation, private sources and trading organization. Volvo International Development Corporation, Gothenburg Sweden, Marketing Director For The Middle Eastern Countries, UAE, Saudi Arabia, Bahrain, Turkey and Iran. Negotiated and established exclusive franchise agreement and turn- key operation. Did market analysis and feasibility studies for Volvo International in the Middle Eastern countries and increase annual sales in excess of 55%. Chief Industrial Engineer, United Carr, manufacturer of plastic knobs for Automotive Industries, Knoxville Tennessee USA. His education background is; Master of Business Administration from IMMEDE Management Institute in Lausanne Switzerland majoring in financing. Bachelor of Science in Industrial and System Engineering from University of Rhode Island in Kingston Rhode Island USA. Certified Business Analyst from International profit Association in Buffalo Grove IL USA. Certified Six Sigma Green and Black Belt from Institute of Industrial Engineers. Extra Curriculum Activity: Senior Member of Institute of Industrial Engineers, Senior Member of ASQ and Senior Member of Swedish Method and Time Measurement Language: Fluent in English, Swedish, German, Turkish, Farsi and some Spanish.

Session III: Industry Solutions
Room Engineering Building E201, 4:00 – 5:15 pm (Friday)
Session Chair: Zakir Siddique, Cooper Standard Automotive, Novi, Michigan

4:00 – 4:25 (Friday)

Sardar Asif Khan, M.Sc., MBA, PE, PMP
Manager - World Class Manufacturing (WCM)
Mack Engine Plant
Fiat Chrysler Automobiles (FCA)
Detroit, Michigan

Asif Khan brings over 25 years of engineering and management experience from industry. With strong Lean / World Class Manufacturing experiences, he has helped companies transform from traditional methodologies to Lean Manufacturing. In his current role as WCM lead at the Mack Engine Plant, Asif is responsible for the implementation of WCM, a methodology that focuses on reducing waste, increasing productivity, and improving quality and safety in a systematic and organized approach. Asif’s solid experience comes with a strong belief in creating a culture that respects and promotes people’s ingenuity and creativity to create trust and bond, which then becomes a potent recipe for collaboration, problem-solving and value-creation. After the re-birth of the Mack Engine Plant, Asif was appointed to establish the WCM organization and lead activities to
Asif has implemented WCM processes, while achieving financial and audit score results to support the FCA’s WCM route map and targets. His role includes strategizing and implementing plans through coaching, auditing and training employees of all levels at the facility.

Previously, Asif led activities as an Industrial Engineering Manager at Mack Engine Plant to launch a new program (V6 pentaster engine). Prior to this role, Asif has had increased responsibility positions including decommissioning an axle plant while transferring the products over to a new facility, as the Industrial Engineering Manager. Asif has helped numerous organizations in translating the WCM methodology into actionable and practical strategies for implementation and integration into factory ways of working. Asif has also worked as a process improvement consultant with the DTE corporate office to streamline line their processes.

Asif earned a Bachelor of Science degree in Electrical Engineering (1990), Master of Science degree in Manufacturing Engineering (2001) and Master of Business Administration degree (2007) from the USA. Currently he is pursuing a Doctorate of Manufacturing Systems Engineering at Lawrence Technological University, Michigan (expected completion 2018). Concurrently, he is an Adjunct Professor at the University of Windsor, where he teaches a graduate engineering course on Process Improvement/ Six Sigma methodologies. Asif sits on numerous boards and committees, and loves volunteering for giving back to the engineering profession and community.

Professional affiliations: Member: Professional Engineers Ontario, Vice Chair: Windsor-Essex Chapter Board, Professional Engineers Ontario, Member: Project Management Institute (PMP) and Member: PAC (ME Program Approval Committee, St. Clair College Windsor)

4:25 – 4:50 (Friday)

Moin Baig
CAE Engineer Airbag systems
General Motors Company
Warren, Michigan

Lean Product Development

Mr. Baig’s background:
• Experienced mechanical engineer with strong emphasis in non-linear dynamic crash simulation for automotive applications using LS-Dyna. Expert in Hypermesh, PRIMER and ANSA. Experienced in linear static analysis and analytical software code NASTRAN.
• Experience in development, testing and CAE simulation of vehicle occupant restraint systems.
• Innovated restraint system for alleviating chest injury in front impact.
• Knowledge of sheet metal forming. Lean implementation and strategies and product development using LEAN principles and TPS.
• Proficient in six sigma techniques such as Critical to Quality, Voice of Customer, Quality Functional Diagrams and Tradeoff analysis.
• Excellent written and oral communication skills. Developed technical presentations and reports.

4:50 – 5:15 (Friday)

Zakir Siddique, PMP
Senior Program Manager
Cooper Standard Automotive
Novi, Michigan

Zakir Siddique is a Senior Global Program Manager at Cooper Standard Automotive, a Tier-1 automotive supplier company for domestic and foreign OEMs. He has a Master's degree in Mechanical Engineering from University of Texas at Arlington and a Master's degree in Business Administration from Michigan State University. He is a PMI certified PMP. Zakir is responsible for the overall management of assigned customer product development programs. He leads global Program Team to meet timing, quality, finance and product requirements for Cooper Standard and customer systems and processes. Prior to Cooper, Zakir worked as a Senior Program Manager at Johnson Controls and also at TRW Automotive. His interests are project management, new business development, strategic planning, globalization, resource and process optimization and design excellence. Zakir also works as an adjunct lecturer at the Eastern Michigan University in the department of Electrical Engineering Technology.
Abdul Talib Bon and Ooi Shi Jun  
Department of Production and Operations Management  
Universiti Tun Hussein Onn Malaysia  
Raja, Johor, Malaysia  

**Demand Forecasting for Strategic Resource Planning**

**Abstract:** Demand forecasting is to forecast the future demand so that manager can easily control the production. Demand is defined as a need (Balbo, Gabriel. 2005). From need we will know how much to supply. Therefore, in this study the expected result is that demand forecasting can be effectively used by the manager to make decision in strategic resource planning. This research study objective is to determine how the implementation of demand forecasting into strategic resource allocation decision can be done and to analyze the issues and develop the new model that will affect the results of demand forecasting and strategic resource planning. To prove this study, the data collection from the firm is needed. The study will be proven from the simulation of the demand forecasting with the collected data from the firm in 4-5 years in order find the best model. The demand data of steel is provided by the Joon Hee MICRON Sdn. Bhd. Nevertheless, Demand Forecasting and Strategic Resource planning are having positive relationship. The hypothesis is accepted. The objectives are successfully achieved and the new model is created. Decisions are made all the time, although sometimes the decision comes unconsciously (Fraga & Anema, 2009). Demand forecasting will be the key to effective decision making process for strategic resource planning.

**Biography:** Dr. Abdul Talib Bon is Professor of Technology Management in the Department of Production and Operations Management at the Universiti Tun Hussein Onn Malaysia. He has a PhD in Computer Science, which he obtained from the Universite de La Rochelle, France. His doctoral thesis was on topic Process Quality Improvement on Beltline Moulding Manufacturing. He studied Business Administration in the Universiti Kebangsaan Malaysia for which he was awarded the MBA. He’s bachelor degree and diploma in Mechanical Engineering which his obtained from the Universiti Teknologi Malaysia. He received his postgraduate certificate in Mechatronics and Robotics from Carlisle, United Kingdom. He had published more 150 International Proceedings and International Journals and 8 books. His research interests include manufacturing, forecasting, simulation, optimization, TQM and Green Supply Chain. He is a member of IEOM, IIE, IIF, TAM, MIM and council member’s of MSORSM.

Sri Mandadapu, MSE, MBA  
Quality Leader - Product Development  
Lead Master Black Belt (MBB)  
General Motors

Sri is a “Lead Master Black Belt” working for the General Motors (GM) team and he has 20 years of exceptional experience that led him to hold two U.S. Patents in his diversified portfolio. One of his Patents (‘Flexible & removable cargo tie-down hooks’ – for Truck Pick up Box – a first-to-market ‘patented’ product that differentiates GM trucks) is generating $14 million in profit for his company and a total profit of $70 million over a five-year program. He is a strategic thinker, innovator, and master problem solver; creator of numerous Best Practices, reusable tools, and methods to improve future designs and optimize processes. In his illustrious career, he coached over 100+ product development/engineering projects that delivered $200+ million in annual cost savings. His work means business, and business is his passion. Two-time recipient of GM’s “People Make Quality Happen (PMQH) Awards”, in recognition of his outstanding contributions to GM quality, and for solving tough quality problems, resulting in significant quality improvement.

Sri has been a Sr. member of an ASQ for over 15 years and holds ‘Six ASQ certifications’. He is a “Design for Six Sigma - Master Black Belt (DFSS MBB)” from GM. He also holds an ASQ “Six Sigma Master Black Belt” and “Quality Manager (CMQ/OE)” certifications. On a daily basis, he works strategically with senior management and provides a project mentorship. His duties involve coaching and mentoring Lead Engineers and engineering teams. He is highly rated, and his advice is “no nonsense”. Sri also holds MBA from Kelley School of Business, Indiana University and MS in Industrial Technology, Quality Management Major, Eastern Michigan University. Don’t miss this opportunity to meet him and listen to what he has to say!

Joseph Ghislain  
North America Regional Manager & Global Body Exterior & Body Interior  
Ford Motor Company - Lean Supplier Optimization (LSO), Global Purchasing  
6-Sigma Black Belt, CEM, REM, CSDP, CP EnMS- Industrial, SEP P.V. – Industrial  
Dearborn, Michigan

As a Senior/Regional Manager in Ford’s Global Purchasing’s Lean Supplier Optimization (LSO), Joe leads Ford Motor Company’s efforts in partnering with their North American Suppliers to implement Lean Manufacturing and operational efficiency improvements and has LSO global responsibility for the Body Exterior and Interior commodities. He is a 6-Sigma Black Belt and during his 30 years at Ford, has held 11 different positions at 12 plants/locations in 5 different skill teams (Manufacturing, Purchasing, Product Development, SE&SE and Ford Land) giving him a wealth of automotive, manufacturing and facility experience. Prior roles include: Stamping/Sheetmetal Manuf. Optimization Mgr.,

Session V: Industry Solutions
Room Engineering Building E201, 11:30 am – 12:45 pm (Saturday)
Session Chair: Dr. Mehran Doulat, Razak School of Engineering and Advanced Technology, UTM Kuala Lumpur, Malaysia

11:30 – 11:55 (Saturday)

Foad Hosseinkhanli
Director of Quality Assurance, Performance and Business Improvement
Amor Health Services, Inc.
Brownsville, Texas, USA

Failure Mode and Effect Analysis: A Lean Six Sigma Approach

Mr. Hosseinkhanli is Director of Quality Assurance, Performance and Business Improvement Amor Health Services, Inc. in Brownsville Texas USA. He was General Manager of Almana Trading in Doha Qatar Middle East and responsible for all aspects in creation and implementing of successful growth of new market development and turn- key operation for various products. Mr. Hosseinkhanli was involved with financial negotiation with national and international banking, corporation, private sources and trading organization. Volvo International Development Corporation, Gothenburg Sweden, Marketing Director For The Middle Eastern Countries, UAE, Saudi Arabia, Bahrain, Turkey and Iran. Negotiated and established exclusive franchise agreement and turn- key operation. Did market analysis and feasibility studies for Volvo International in the Middle Eastern countries and increase annual sales in excess of 55%. Chief Industrial Engineer, United Carr, manufacturer of plastic knobs for Automotive Industries, Knoxville Tennessee USA.

His education background is: Master of Business Administration from IMMEDE Management Institute in Lausanne Switzerland majoring in financing. Bachelor of Science in Industrial and System Engineering from University of Rhode Island in Kingston Rhode Island USA. Certified Business Analyst from International profit Association in Buffalo Grove IL USA. Certified Six Sigma Green and Black Belt from Institute of Industrial Engineers.

Extra Curriculum Activity: Senior Member of Institute of Industrial Engineers, Senior Member of ASQ and Senior Member of Swedish Method and Time Measurement Language: Fluent in English, Swedish, German, Turkish, Farsi and some Spanish.

11:55 – 12:20 (Saturday)

Mehran Doulat, BSc., MEM, MQM, EFQM, Ph.D.
Senior Research Fellow
Genichi Taguchi Center for Quality and Sustainability
Razak School of Engineering and Advanced Technology
UTM Kuala Lumpur
Kuala Lumpur, Malaysia

Mehran Doulat Abadi is currently a Visiting Senior Research Fellow at University of Technology Malaysia (UTM). He has special interest in examination issues relating to Multi Criteria Decision Making (MCDM), Engineering Management and business excellence including the use of the European Foundation for Quality Management (EFQM) Excellence Model. He holds double Master’s Degrees in Engineering Management with specialization in Quality Management and a Graduate Certificate in Project Management from University of Wollongong, New South Wales, Australia. He has written numerous papers on the topic of quality management and business excellence based on his research and consultative works. His papers have been published in refereed scientific journals as well as international conferences. He is a Registered Professional with Australian Organization for Quality (AOQ) and a senior member of the American Society for Quality (ASQ). He is a Certified European Excellence Assessor in Dubai Quality Award (DQA) program since 2007. He was recently engaged as a senior project coordinator in the Mystery Shopper Service Excellence Project under the directive of Prime Minister’s Office (PMO) in Dubai, UAE.

12:20 – 12:45 (Saturday)

Dr. Ishtiaq Hussain
Manufacturing Process Lead
General Motors Corporation
World Head Quarters
Pontiac, Michigan

Dr. Muhammad Ishtiaq Hussain is Adjunct Faculty in Lawrence Tech University. He earned his Doctoral of Engineering in Manufacturing Systems (DEMS) and Master of Engineering in Manufacturing Engineering (MEMS) Degrees in May 2008 from Lawrence Tech University, Michigan, USA. He also earned Master of Science in Quality from Eastern Michigan University in 2003. Dr. Hussain is a certified DPSS Black Belt from General Motors.
University and CMI from ASQ. He is currently working in General Motors Corporation Headquarter in Powertrain division in USA. Dr. Hussain has expert level knowledge in the following disciplines.

- Design of Experiment (DOE)
- Statistical Process Control (SPC)
- Geometric Dimensioning and Tolerances (GD&T)
- Design for Six Sigma (DFSS)
- Manufacturing Processes & Technology
- Gauging and Inspection (GR&R)
- Process Quality Analysis
- Machining Expert and MQL (green manufacturing) Expert

Dr. Hussain is a source of knowledge to all the GM machining plants. He has launched many New and major GM Powertrain engine programs. Dr. Hussain authored and published several papers in machining and measurement systems.

Michelle Hackett is a results-driven, business professional with a proven record of success within engineering environments; experienced in taking large conceptual projects, dividing them into components, establishing plans and a critical path, and then delivering projects on time. Her professional work experience consists of: delivering design and engineering information that is precise, unquestionably communicated, and complete, then teaching others to do this as well. This includes performing needed engineering calculations, precision measuring for reverse engineering or quality reasons, applying drafting techniques for creating layouts, 3D models, assemblies, and details. Additional responsibilities included: preparing of bills of materials, completing engineering change orders, tracking revisions, order entry, sales quoting, purchasing of materials, creating production hot lists, drawing file, and database maintenance.

Experiences:

- CAD Production Manager – RGIS
- CAD Professor, Oakland Community College
- CAD Professor, Macomb Community College
- Past Chair SME Detroit Chapter One
- 3D CAD Designer, Oxbow Machine Products Inc.
- Application Engineer, Studica, Inc.
- Computer Drafting & Design Instructor, ITT Technical Institute
- CAD Designer, FASTUBE, LLC

Education:

- University of Phoenix - Livonia Campus, Master's, Business Administration, 2006 – 2008
- University of Phoenix - Livonia Campus, Bachelor's, Business Management, 2003 – 2006

Mohammad Hijawi is a Global Reliability Technical Fellow in the Powertrain Quality and Reliability group at FCA US LLC. He has 28 years of engineering, research, and managerial experience specializing in Quality and Reliability. He received the doctorate in Mechanical Engineering from Wayne State University. His main areas of interest are proactive reliability, statistics, reliability demonstration, accelerated life testing, reliability growth, problem solving, warranty forecasting and Design for Six Sigma. He is a certified DFSS master black belt. He authored multiple professional publications on the topics of reliability, statistics, vibrations, and Six Sigma.
Muhammad Arif Islam
Functional Safety Manager
Breaking Engineering
ZF TRW
Active & Passive Safety Technology
Livonia, Michigan

Muhammad Arif Islam is a Functional Safety Manager of Braking Engineering at ZF TRW, Livonia, Michigan. He was a System Safety Engineer and System Engineer at TRW from 2004 to 2012. Mr. Islam was a Reliability Engineer at Ford Motor Company for four years and Reliability Engineer at General Motors Company for one year. He was an Engineer at Kamax LP.

Mr. Islam is highly motivated and result-oriented professional with effective interpersonal communication and strong leadership skills. He has an extensive background in Automotive Functional Safety, System Engineering and Product Development for over 16 years.

Mr. Islam has received his BS in Mechanical Engineering from Bangladesh University of Engineering and Technology (BUET), Dhaka and MS is Industrial Engineering from Wayne State University.

Dr. Galia Novakova
Faculty of Mathematics and Informatics
Sofia University
Bulgaria

Dr. Rashmi Jha
Associate Professor and Program Coordinator of Master of Computer Applications
Gitarattan International Business School
Guru Gobind Singh Indraprastha University
New Delhi, India

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

Ms. Priyadarshani Premarathne
Lecturer
Department of Sociology
University of Peradeniya
Peradeniya 20400, Sri Lanka

Dr. Eng. Galia Novakova, Quality Engineering Professional

Dr. Eng. Galia Novakova is Asst. Prof. in the Faculty of Mathematics and Informatics at Sofia University, Bulgaria. She is taking part in various research groups and she performed postdoc at Polytechnic University of Milan, Italy during 2003-2005, at CNR – National Research Center in Milan, Italy during 2006, University of Missouri Science and Technology, Dept. of Engineering Management, USA during 2010-2011. She has also participated in various scientific conferences presenting articles (Dubai, Hong Kong, Orlando, Kuala Lumpur, etc.) and she has been a session chair in them.

Her education background is:

- PhD in Industrial Engineering and Management, in particular in Statistical Process Control, Polytechnic University of Torino and University of Parma (consortium program), Italy.
- MSc degree in Information and Management Technologies, Chemical-Technological and Metallurgical University, Sofia.
- MSc degree in Quality Management and Statistical Process Control, Polytechnic University of Torino, Italy and Chemical-Technological and Metallurgical University, Sofia.

Dr. Eng. Galia Novakova Nedeltcheva has sound practical experience – she was appointed as advisor to the Minister for development of e-Government at the Council of Ministers in Republic of Bulgaria in 2013. She was also a manager of IT projects (Methodia, Bulgaria and TXT e-solutions, Milan) and a consultant in quality management and statistical process control in Italy (MAP Ltd., Saronno, Italy).
**Sunday (September 23, 2016)**

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**Session VIII: Industry Solutions**

Room Engineering Building E201, 8:00 – 9:15 am (Sunday)

Session Chair: Gregg Young, Young Associates, Inc., Midland, MI

08:00 – 08:25 (Sunday)

**Bob Doering, MBA**

Quality Engineering Professional  
Expert in CorrectSPC for Precision Machining - Trainer, Consultant  
Lagrange, Ohio

Bob Doering has been in the quality field for over 20 years. He is currently a quality engineer for an automotive component manufacturing firm, as well as a consultant in SPC, Metrology and Quality Concepts training. He holds associates degrees from Lorain County Community College of Elyria, Ohio and The University of Akron of Akron, Ohio; BA in Business and MBA in Systems Management from Baldwin-Wallace College, Berea, Ohio.

08:25 – 08:50 (Sunday)

**Walter Schwartz**

Sustainability & Business Strategy Supervisor  
Ford Motor Company

*Manufacturing Analytics: The State of Implementation across Industries*

Mr. Schwartz is a Sustainability & Business Strategy Supervisor at Ford Motor Company. He has the following areas of expertise and interests:

- **Manufacturing**
  - Ford Blackbelt Exam Passed  
  - Seven years of manufacturing process engineering in an aluminum transmission plant

- **Corporate Support**
  - Supervisor of Fuel economy team to lead CAFE (Corporate Average Fuel Economy) efforts  
  - Supervisor of Business, Strategy, and Sustainability at the Research level  
  - Data analytics supervisor

He has supervised sustainability and strategy efforts including fuel cell program to ensure future product portfolio remains competitive with other OEMS. Also Mr. Schwartz has coordinated business issues including preparation of high level management documents for monthly and quarterly review. Mr. Schwartz received bachelor’s degree in industrial engineering from University of Toledo and master’s degree in manufacturing systems engineering from University of Michigan-Dearborn.

08:50 – 09:15 (Sunday)

**Gregg Young**

President and Founder  
Young Associates, Inc., Midland, MI

*Lost Secrets of the Origin of Six Sigma*

Bio: Gregg Young is President and Founder of Young Associates, Inc. (http://youngassocinc.com). He has worked with large corporations and small businesses helping them to solve problems, improve quality, increase profits, and develop successful new products. Gregg has spent over 40 years solving problems, leading teams, and teaching problem solving skills. He experienced both successes and frustrations, so he studied dozens of processes searching for best practices he could add to his clients’ processes so they would deliver bigger results faster. When he discovered that best practices do exist, it sparked his passion to share this knowledge, so that anyone can solve problems as effectively as Sherlock Holmes solved crimes. He is the author of three books focused on upgrading business processes by adding convergent, observation-based methods to existing processes. His latest book is Reasoning Backward: How Sherlock Holmes Can Make You a Better Problem Solver. It adapts these techniques for students as well as businesses, providing everyone with the skills they need to solve problems effectively and create a competitive advantage in the global marketplace. His most recent work has been the development of Active Time Profiles, a graphic tool to accelerate and focus cycle time reduction in any system. Young has a B.A. in Chemistry from Rice University.

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**Session IX: Industry Solutions**

Room Engineering Building E201, 2:30 – 3:45 pm (Sunday)
Abdul Talib Bon and Silvia Firda Utami  
Department of Production and Operations Management  
Universiti Tun Hussein Onn Malaysia  
Johor, Malaysia  

Sukono  
Department of Mathematics, Faculty of Mathematics and Natural Sciences  
Universitas Padjadjaran  
Bandung, Indonesia

**Modeling Analytical Hierarchy Process and Fuzzy Inference System Tsukamoto for Crude Palm Oil Production Planning**

**Abstract:** Decision making has become a routine activity carried out by the production manager at Sindora Palm Oil Mill. The decision making process does not always run smoothly, sometimes faced with obstacles due to uncertainty and vagueness. These obstacles can cause major problems if not dealt with quickly and accurately. One of the problems that arise is the decline in production quantity. Therefore, this study intended to help the company determine the optimal amount of crude palm oil production and to determine the order of priority factors influencing the decline in production quantity and also apply the Analytical Hierarchy Process (AHP) and Fuzzy Inference System Tsukamoto (FIS Tsukamoto) methods in production planning to assist and facilitate the decision-makers in making decisions. FIS Tsukamoto is a method for decision making that uses monotone reasoning. The data input obtained from documentation like inventory, demand, and production data. In addition, AHP also uses a method for decision making and the data obtained from interviews and questionnaires. The results of this study are the total production and inventories of Crude Palm Oil by the year 2014 turned into optimal and stable; profit is higher than previously; then, the plot data also showed that the total production in 2014 is not stable because there are still decreases. Then, the factors affecting the decline in total production are internal factors. The order of priority of the internal factors is factor capital, labor, raw materials and technology & machines. This study is particular suited if used in crude palm oil company like Sindora Palm Oil Mill, because give more benefit to the company.

**Biography:** Dr. Abdul Talib Bon is Professor of Technology Management in the Department of Production and Operations Management at the Universiti Tun Hussein Onn Malaysia. He has a PhD in Computer Science, which he obtained from the Universite de La Rochelle, France. His doctoral thesis was on topic Process Quality Improvement on Beltline Moulding Manufacturing. He studied Business Administration in the Universiti Kebangsaan Malaysia for which he was awarded the MBA. He's bachelor degree and diploma in Mechanical Engineering which his obtained from the Universiti Teknologi Malaysia. He received his postgraduate certificate in Mechatronics and Robotics from Carlisle, United Kingdom. He had published more than 150 International Proceedings and International Journals and 8 books. His research interests include manufacturing, forecasting, simulation, optimization, TQM and Green Supply Chain. He is a member of IEOM, IIE, IIF, TAM, MIM and council member's of MSORSM.

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Ahmed Al-Jabr, CMBB  
President, Saudi IEOM Society  
Dhahran, Saudi Arabia

**“Challenges and Opportunities of Lean and Six Sigma for Saudi Industries”**

Ahmed Aljabr is a president of IEOM Society – Saudi Arabian Chapter, as quality engineer and Six Sigma Master Blackbelt Certified, his experience spans in industries and operations areas including working in different successful project, such as working win the International Automotive Components (IAC) to install a solar photovoltaic panel system within their facility, Whitlam Label Company (WLC) to layout the travel distance to minimize the non-value added transportation time on their factory, and Shiloh Industries Inc. through a Six Sigma project with an annual cost savings of over $500,000, figured how the process was mapped, characterized, analyzed, improved and controlled, and explore which tools were used to quantify the amount of variation within the process as well as the cost of that variation.

He is an expert in the areas of Lean Six Sigma, Continues Improvement, Quality Management, Lean Manufacturing, Operational Excellence, Optimization, Strategy, Project Management, Supply Chain Management, Public Relation, and Global Leadership. He is an active member of SAE, IIE, ASQ, ASME, LEI, IEOM, and SME. He was a president of the Saudi Student Union at LTU, President of Arab American Association of Engineers and Architects (AAAE), he received an Exemplary Leadership Award, Best leader of the year from Lawrence Technological University, and Outstanding Leadership Award from Saudi Arabian Cultural Mission, Saudi Embassy at Washington D.C. He has BS in Mechanical Engineering, MS in Manufacturing System Engineering, MS in Engineering Management, and he is PhD Candidate Manufacturing System Engineering at Lawrence Technological University.

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Ishak Zaman
Product Development Engineer
Ford Motor Company

Offshore and Onshore Farming in Bangladesh and Developing Countries

Ishak Zaman is working as a Product Development Engineer at Ford Motor Company. He has worked as design and release engineer of Restraints systems (Steering Wheel, Driver Airbag, Seat belts, Side Airbag, Side Air Curtain, Passenger Airbag) led restraints engineering cost attack team, led vehicle cost attack engineering team for Focus Seat & Restraints, durability engineer and vehicle launch management engineer. Mr. Zaman earned Master of Science in Mechanical Engineering from Oklahoma State University and Bachelor of Science in Mechanical Engineering from Bangladesh University of Engineering and Technology. Mr. Zaman is serving as a member of the Board of Director of IEOM Society. He is awarded with a US Patent and has pending US patent applications.

Gregg Young
President and Founder
Young Associates, Inc., Midland, MI

"Using Active Time Profiles to Jumpstart Lean and Cycle Time Improvement"

Gregg Young is President and Founder of Young Associates, Inc. (http://youngassocinc.com). He has worked with large corporations and small businesses helping them to solve problems, improve quality, increase profits, and develop successful new products. Gregg has spent over 40 years solving problems, leading teams, and teaching problem solving skills. He experienced both successes and frustrations, so he studied dozens of processes searching for best practices he could add to his clients' processes so they would deliver bigger results faster. When he discovered that best practices do exist, it sparked his passion to share this knowledge, so that anyone can solve problems as effectively as Sherlock Holmes solved crimes. He is the author of three books focused on upgrading business processes by adding convergent, observation-based methods to existing processes. His latest book is Reasoning Backward: How Sherlock Holmes Can Make You a Better Problem Solver. It adapts these techniques for students as well as businesses, providing everyone with the skills they need to solve problems effectively and create a competitive advantage in the global marketplace. His most recent work has been the development of Active Time Profiles, a graphic tool to accelerate and focus cycle time reduction in any system. Young has a B.A. in Chemistry from Rice University.

Nirav Sheth
Manufacturing Engineer
Eberspaecher North America
Brighton, Michigan

Nirav Sheth is a Manufacturing Engineer at Eberspaecher North America, Brighton, Michigan. He has completed Master of Science Industrial Engineering from Lawrence Technological University, Michigan, USA. He holds a Bachelor of Engineering in Mechanical Engineering from Pune University, India. He has experience in design and quality engineer at Ploytech Cooperation, Mumbai India. He has published Proceeding in Industrial Engineering & Operation Management. His research Interest Includes manufacturing, optimization, productivity, simulation (Arena), Microsoft Project Management, Minitab, Six Sigma and 3D Modeling (CATIA, Pro/E, Unigraphics, AutoCAD).

Dr. Taufiqul Islam
Operations Manager
IEOM Society International
Canton, Michigan

Dr. Taufiqul Islam is an operations manager of Industrial Engineering and Operations Management (IEOM) Society International, Michigan, USA. He is managing IEOM membership, conference activities, editing newsletter, arranging tour and coordinating training activities. He received B.Sc. (Agricultural Engineering) from the Bangladesh Agricultural University in 1981 and M.S. (Agricultural Engineering) from the Newcastle University, United Kingdom, in 1984. He has earned Ph.D. degree in Bio-Systems Engineering from the Michigan State University in 2004.

In 1981 Dr. Islam joined in the Department of Agricultural Engineering, Bangladesh Rice Research Institute (BRRI) as Scientific Officer and became Senior Scientific Officer in 1990 and Principal Scientific Officer in 1996. He has modeled and investigated experimentally Seed Corn Drying in a commercial seed processing facility. The model was used to assess the effect of the main operating parameters on the dryer capacity and energy cost. Dr. Islam served in different capacity (as a Research Assistant, Research Associate, Software Engineer, QA Tester) in Tumblewind Corporation, Avtrex Inc., and AdeptMax Corporation.
Dr. Islam attended industrial training in the field of Agricultural Machinery Testing (IAM, BRAIN, Japan) and Principles of IC Engine Operation (BADC, Bangladesh). He was awarded Agricultural Research Management Program scholarship (1998), and Japan International Cooperation Agency scholarship, *Agricultural Machinery Testing* (1992). Dr. Islam has also published number of papers in different journals around the World. Dr. Islam has attend seminars and conferences. He is a member of IEOM Society.

5:15 – 5:50 pm (Sunday)

**Jack He**
Vice President
MCC (Xiang Tan) Mining Equipment LLC
Xiangtan City, Hunan
China

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### Submissions Received from Countries and Territories

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**IEOM Student Chapter at Al Akhawayn University, Ifrane Morocco**

**FACULTY ADVISOR:**

**Dr. Ilham Kissani**
Engineering & Management Science
School of Science & Engineering

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GD&T (Geometric Dimensioning and Tolerancing) Workshop
September 23, 2016 (Friday), 8:00 am – 5:00 pm
Lawrence Tech Campus, Southfield, Michigan
Lear Auditorium, T429 – Architecture Building

Workshop Chair: Saso Krstovski, Ford Motor Company

PROGRAM

7:00 - 8:00 am Continental Breakfast

8:00 - 8:20 am GD&T ASME Standards and Fundamentals - Saso Krstovski, Ford Motor Company

8:20 - 8:40 am Ford Corporate GD&T Training and how engineers and designers work together on daily basis on GD&T application and drawing including standards, Rochelle Courson, Product Design Senior, GD&T and Ford Standards - Global Engine Engineering Department, Ford Motor Company

8:40 - 9:30 am GD&T Fundamental and Rules - Dr. Joseph Ogundu, President and CEO – Emerald Global Consulting Inc., West Bloomfield, Michigan, USA

9:30 - 11:00 am Opening Keynote - Carlo Materazzo, Head of World Class Manufacturing (WCM), FCA – Global, Fiat Chrysler Automobiles (FCA), Auburn Hills, Michigan

11:00 am - 12:00 pm: GD&T Implementations Issues in Design and Manufacturing
Mohammad Maqsoud Haq, Metrology Supervisor, Sr. Dimensional Engineer, Fiat Chrysler Automobiles (FCA), Jefferson North Assembly Plant, Detroit, Michigan

12:00 - 1:00 pm: GD&T with Hands-on Practices
Brian P. Heersink, DM/GDT/Gauging CAD Primary, CAD/CAE Department, TDE, Ford Motor Company

1:00 - 2:30 pm - Lunch Keynote
Dr. Jeffrey Abell, GM Technical Fellow, Lab Group Manager, Manufacturing Systems Research, General Motors Global Research and Development, Warren, Michigan (Lunch Provided)

2:30 - 3:15 pm GD&T Experiences
Mark E. Foster, President, Applied Geometrics, Inc. (AGI), Harwood Heights, Illinois

3:15 - 3:45 pm Gaging and Inspection Experiences on GD&T
Jim Beary, NAO Inspection Technologies Manager & Dimensional Engineering Instructor, Benteler Automotive, Grand Rapids, Michigan

3:45 - 4:15 pm GD&T Experiences and Implementation Issues
Tom Geiss, Lead Course Developer – GD&T Basics, ASME Senior GD&T Certified Professional, Pareto Learning LLC, South Carolina

4:15 - 4:45 pm GD&T Experiences
John-Paul Belanger, Certified Sr. GD&T Professional, President, Geometric Learning Systems, Detroit, Michigan

4:45 - 5:15 pm Tolerance Stack up
Dr. Ahad Ali, Associate Professor, Director of BSIE and MSIE Programs and Director of Smart Manufacturing and Lean Systems Research Group at Lawrence Tech - Industry Speaker

TOPICS

- Symbols, rules and principles - ASME Y14.5-2009 Standard
- Fundamentals of GD&T
- Tolerance Stack-Up Analysis
- Statistical Tolerancing
- Angularity
- Circular Runout
- Circularity (Roundness)
- Concentricity
- Cylindricity
- Datum Features
- Flatness
- Material Conditions (MMC, LMC, RFS)
- Parallelism
- Perpendicularity
- Position
- Profile
- Runout (Circular / Total)
- Straightness
- True Position
**Saso Krstovski**  
Test Engineer  
Ford Motor Company

Saso Krstovski is working at Ford Motor Company as a Test Engineer since 2010. Mr. Krstovski is detail oriented and data-driven engineer with over 20 years of manufacturing experience. He is equipped with diversely skilled at problem identification and resolution within in early stages to avoid time/cost expenditures. His expert level skills are in information technology, engineering, test and manufacturing systems. His background ranges from supervision to engineering. Mr. Krstovski held several different engineering discipline rolls within Ford. He has extensive six sigma knowledge inside and outside of Ford organization. Mr. Krstovski collaborated with education sector on manufacturing systems projects and ideas on several occasions. In the process of pursuing an advance degree in manufacturing systems. He is a doctoral student at the Doctor of Engineering in Manufacturing Systems (DEMS) at Lawrence Technological University. Mr. Krstovski has Master in Electrical Computer Controlled Systems from Wayne State University. He has published papers and scientific articles.

**Rochelle Courson**  
Product Design Senior  
GD&T and Ford Standards  
Global Engine Engineering Department  
Ford Motor Company

Rochelle Courson is a design Senior whose main function is GD&T and Ford Standards in the Global Engine Engineering department at Ford Motor Company. She has over 30 years’ experience in drafting, design & CAD. She is currently Ford’s representative on the ASME Y14.5 Dimension and Tolerancing standard, Y14 Main Committee, Y14.36 Surface Texture Symbols, and is secretary for a new ASME Measurement Reporting standard that is still in the development phase. She is also involved in several other ASME cross-committee Joint Advisory teams. In addition to her involvement with the ASME standards, she is also works on the development of Ford corporate GD&T training materials, and consults with engineers and designers daily on GD&T application and drawing related standards issues. She has a BS in Industrial Administration and a Leadership Certification from Central Michigan University.

**Brian Heersink**  
DM/GDT/Gauging CAD Primary  
CAD/CAE Department  
Ford Motor Company

Brian Heersink has been working for Ford Motor company for 22 years. He began working seriously with GD&T while on a 6 year assembly plant assignment in Virginia. Currently, Brian works in the CAD/CAE department of Transmission/ Driveline Engineering in Livonia, Michigan. He is a primary, working in Dimensional Management Analysis, with special focus on GD&T, training and Gauging issues. Brian completed an AA degree at Macomb Community College and BA at Dordt College in Iowa. He is originally from Canada. Having lived more than half his life in the US, he has lost his “eh?” and doesn’t expect to find it back.

**Mohammad Maqsoud Haq**  
Metrology Supervisor, Sr. Dimensional Engineer  
Fiat Chrysler Automobiles (FCA)  
Jefferson North Assembly Plant  
Detroit, Michigan

Consummate Manufacturing strategist, Prolific GD&T data analyzer and Systems integrator, Acknowledged Companywide for ground breaking efforts in Large scale Manufacturing subsystem launching that delivers throughput and propels the Six Sigma initiative. Vast Experience spans Metal Stamping & Die Tooling, Injection Molding, Complex multi-models manufacturing in a common platform under target cost & timing in the “Big 3” arena.

~Shainin Reactive Black Belt Certified  
~Product Creation, Dimensional Verification Analysis, Process Optimization, Assembly Integration and New Program Launch:  
~Assembly Design & Manufacturing Feasibility Specialist:  
~Sheet Metal stamping and Fabrication Specialist:  
~Lean Manufacturing Principle implementation with Six Sigma.  
~New Program management from design to launch under target cost:  
~Program Management, Supplier Quality and Vendor cost and manpower management:

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, DaimlerChrysler 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 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.

Mark E. Foster
President
Applied Geometrics, Inc. (AGI)
Harwood Heights, Illinois

Mr. Foster is a mechanical engineer with over 30 years of experience in design, quality, and Geometric Dimensioning and Tolerancing (GD&T). He is currently the President of Applied Geometrics, Inc. AGI is a technical education and consulting firm dedicated to providing support and high quality education and training services that improve a company’s competitive position, and profitability.

Mark is a member of the ASME Y14.2 committee and participates regularly in the ASME Y14 meetings throughout the country. Mark has held Management positions in Quality Assurance, Manufacturing Engineering, and Design Engineering and is the chief instructor for AGI. He has provided GD&T training for hundreds of individuals and companies, such as Harley-Davidson, Delco Electronics (Delphi), Nissan, Briggs & Stratton, Woodward Governor Company, Dart Container Corporation, Skil-Bosch Power Tools and more, in GD&T, SPC, ISO/QS-9000, and Print Reading, as well as Train-the-trainer classes.

Mark was a charter member of the Geometric Dimensioning and Tolerancing Professional (GDTP) Senior Level examination. He passed the first ever GDTP Senior Level exam administered by the ASME, and is Senior Level Certified (GDTP #S-0114) in accordance with the ASME Y14.5.2 Standard for the Certification of Geometric Dimensioning and Tolerancing Professionals. Unlike many GD&T instructors, Mark has actually applied his training to real-world designs on a regular basis during his extensive experience from the design, manufacturing and quality perspectives. This experience and ongoing practical application provides him with the unique ability to relate the common problems that inevitably arise between these groups during the production of a part.

Jim Beary, PMP, GDTP-S, SSBBP
NAO Inspection Technologies Manager & Dimensional Engineering Instructor
Benteler Automotive
Grand Rapids, Michigan

Mr. Beary has over 20 years of experience in the development, engineering, and project management of check fixtures and functional gages that are physical representations of the concepts and boundaries defined by geometric dimensioning and tolerancing. Jim has conducted CAD design, gage development, and GD&T training in companies ranging from regional tool and gage shops to global and fortune 500 companies in the automotive, medical, oilfield services, robotics, defense, fire protection, and tooling industries.

He holds Senior GDTP (Y14.5) Geometric Dimensioning and Tolerancing Professional Certification through the American Society of Mechanical Engineers, in addition to being a certified Project Management Professional (PMP) through the Project Management Institute. He also attained
Competent Communicator status through Toastmasters International to enhance his presentation skills while completing classes towards his Bachelor's degree at Southern Illinois University, Carbondale College of Engineering.


Tom Geiss
Lead Course Developer – GD&T Basics
ASME Senior GD&T Certified Professional
Pareto Learning LLC
South Carolina

Tom Geiss is the owner of Pareto Learning LLC and the lead course developer of GD&T Basics. He has worked as an automotive/design engineer for ten years with several companies, including BMW Manufacturing and ZF Transmissions. Throughout his career, he has actively applied concepts of Geometric Dimensioning and Tolerancing to the automotive and mechanical fields to improve functional communication of design concepts. However, Tom believes that for far too long GD&T training has been too complicated and inaccessible to many. This led him to develop a GD&T resource website and an online training course dedicated to improving this important knowledge in the mechanical world: www.gdandtbasics.com.

Tom has collaborated with other dedicated engineers to create an amazing resource to help others learn the concepts of GD&T easily and effectively. He strongly believes that the best way to learn and apply GD&T is to show how it is actually used in real world applications, not just how it is listed in the standards. GD&T can save time, money and headache by focusing on what is functionally necessary for a product and design. Tom has seen proof that those who know how to interpret and apply GD&T correctly are much more adept at making a positive impact in their technical work.

Tom has received a BS in Mechanical Engineering from Clarkson University and is an ASME Senior-Level Certified GD&T Professional.

John-Paul Belanger
Certified Sr. GD&T Professional
President, Geometric Learning Systems
Detroit, Michigan

John-Paul Belanger is a Certified Sr. GD&T Professional. He is President of Geometric Learning Systems, Detroit, Michigan. As president and principal consultant, Mr. Belanger works with companies to train engineers and manufacturing personnel in the proper use of geometric tolerancing (GD&T), and how it should be interpreted on prints. He teaches seminars (both comprehensive and overview) in this topic, and also serve as a consultant in GD&T and FMEA as new designs are released. Mr. Belanger is an adjunct engineering instructor at Omnex Inc., Ann Arbor, Michigan. He is offering GD&T and other technical training to clients of Omnex, a global provider of quality and engineering services. Mr. Belanger was a senior engineer at General Physics. He earned his BS in Aerospace Engineering from University of Michigan with specialization in aircraft design and aviation safety.

Dr. Ahad Ali
Associate Professor
Director – Bachelor of Science in Industrial Engineering (BSIE)
Director – Master of Science in Industrial Engineering (MSIE)
Director – Smart Manufacturing and Lean Systems Research Group
A. Leon Linton Department of Mechanical Engineering
Lawrence Technological University
Southfield, Michigan

Ahad Ali is an Associate Professor, and Director of Master of Engineering in Manufacturing Systems and Master of Science in Industrial Engineering in the A. Leon Linton Department of Mechanical Engineering at the Lawrence Technological University, Michigan, USA. He earned B.S. in Mechanical Engineering from Khulna University of Engineering and Technology, Bangladesh, Masters in Systems and Engineering Management from Nanyang Technological University, Singapore and PhD in Industrial Engineering from University of Wisconsin-Milwaukee. He has published journal and conference papers. Dr Ali has completed research projects with Chrysler, Ford, New Center Stamping, Whelan Co., Progressive Metal Manufacturing Company, Whittlam Label Company, DTE Energy, Delphi Automotive System, GE Medical Systems, Harley-Davidson Motor Company, International Truck and Engine Corporation (ITEC), National/Panasonic Electronics, and Rockwell Automation. He is a co-founder of International Conference of Industrial Engineering and Operations Management (IEOM) and serving as an executive director of IEOM Society International. His research interests include manufacturing, simulation, optimization, reliability, scheduling, manufacturing, and lean. He is member of ASEE, IEOM, IIE, INFORMS, SME and IIEE.
Lean Six Sigma Green Belt Certification Workshop
LAWRENCE TECH, Southfield, Michigan
September 24-25, 2016 (Saturday & Sunday), Time: 8:00 pm - 5:00 pm

DAY 1: Saturday, September 24, 2016
4 hours – Lean Six Sigma Overview and Lean Awareness
1 hour lunch
Day 1: 2 hours – Define and Measure
Day 1: 2 hours – Analyze

DAY 2: Sunday, September 25, 2016
Day 2: 1.5 hours – Improve
Day 2: 1.5 hours – Control
Day 2: 2 hours – How to do lean six sigma project in industrial applications
Day 2: 2 hours Project Closure and Wrap-up

Workshop Materials:
• Six Sigma and Lean Green Belt training binder with all workshop materials
• The Lean Six Sigma Pocket Book
• Six Sigma project management tool – Structured Project Guide
• Project case studies
• Access to post workshop online (Moodle) training materials – 3 months free access

Workshop notables:
• Participants will work in a workshop format with data collected in a simulated project in the workshop
• Participants will learn to use the Structured project Guide and get a copy of same to use in their projects
• Participants will be given a Six Sigma Yellow Belt certificate with a provisional green belt certificate on completion of class
• Participants will be given a Six Sigma Green Belt on completion of a project signed off by their sponsor

SPEAKER
Jayant Trewn, ASQ Fellow, Ph.D.
Lean Six Sigma Master black belt
Performance Coach and Advisor

Jayant Trewn is an Industrial Engineer specializing in Quality Systems design, development, implementation and management. Jayant has accumulated over a decade of experience working in healthcare organizations such as Spectrum Health Medical Group, Beaumont Hospitals, and service organizations such as Thomson Reuters and Lason Systems, where he built healthcare and service delivery process improvement programs based on lean, Six Sigma and PDCA concepts. He also worked for two years at Thomson Reuters working as Director of Quality Assurance, IP and Science division, managing the quality of acquisition of data for scientific research. Jayant has been teaching quality engineering since 1997 in his roles as Adjunct Professor at Lawrence Technological University, Wayne State University and Oakland University, all in Michigan, in addition to giving quality engineering talks, seminars and workshops at numerous national and international conferences. Jayant has also served as a Research Analyst for Wayne State University, Center for Urban Studies and Office of Strategic Planning from 1993 to 1999. Jayant has written two books, Practical Lean Sigma for Healthcare and Multivariate Statistical Methods in Quality Engineering and he has been published in international journals. Jayant is a Fellow of ASQ and he holds a Doctorate degree in Industrial Engineering from the College of Engineering, Wayne State University, Detroit, MI, USA. He earned his MBA in Information Systems at Wayne State University and his Bachelor of Engineering degree from Madras University, India.
Monte Carlo Simulation & Optimization for Robust Design with DiscoverSim

September 23, 2016 (Friday)
Time: 8:00 am – 5:00 pm

This one day workshop will introduce participants to Monte Carlo simulation and optimization for robust design and Design For Six Sigma (DFSS). The Excel add-in DiscoverSim Version 2 by SigmaXL will be introduced and used throughout the workshop with case studies. A complimentary license of DiscoverSim (value $995) will be given to each participant!

Workshop Outline:
- Introduction to Monte Carlo Simulation
- Introduction to Optimization for Robust Design and Design for Six Sigma (DFSS)
- Navigating DiscoverSim software
- Distribution Fitting
- Specify Input Correlations
- Simulation Settings
- Case Study 1: Profit Simulation
- Optimization Settings
- Case Study 2: Magazine Production Optimization
- Case Study 3: Optimum Project Selection
- Case Study 4: Variation Reduction of Catapult
- Case Study 5: Robust Design of Shut-Off Valve Spring Force
- Multiple Response Optimization (MRO)
- Case Study 6 (time permitting): MRO and Tolerance Design of Low Pass RC Filter

Instructor:
John Noguera, P. Eng., CTO & Co-founder SigmaXL Inc.

John Noguera is Co-founder and Chief Technology Officer of SigmaXL, Inc., a leading provider of user-friendly Excel add-ins for statistical and graphical analysis. John leads the development of SigmaXL and DiscoverSim with a passion for ease-of-use, practical & powerful features, and statistical accuracy. John has also specialized in teaching statistical methods and consulting in the implementation of Six Sigma Quality – with a focus on practical application with return on investment, in manufacturing, service and transactional areas. Since 1989, he has provided consulting and training services to more than 5000 black belts, green belts, managers, engineers, and business professionals in North America, Central America, Australia, Asia, Middle East and Europe. John is a certified Six Sigma master black belt and was an instructor at Motorola University. He co-developed Motorola’s External Six Sigma Green Belt program which utilized the SigmaXL software tool. John was fortunate to have started his involvement with Six Sigma being mentored by the originator of Six Sigma, Bill Smith. John has a B.A.Sc. in Electrical Engineering (1981) from the University of Waterloo. He is a member of the Professional Engineers of Ontario (PEO), American Statistical Association (ASA), INFORMS and Senior Member of the American Society for Quality (ASQ). He has authored conference papers on Statistical Process Control and Six-Sigma Quality and has been a guest lecturer at the University of Notre Dame. He is a contributing author in the Encyclopedia of Statistics in Quality and Reliability (Wiley).

IEOM Competitions
Undergraduate Student Paper Competition sponsored by Siemens
Graduate Student Paper Competition sponsored by Eaton
SIEMENS PLM Student Design Competition
High School STEM Project Presentation Competition
Undergraduate Research Presentation Competition
Senior Capstone Design Project Poster Competition
Doctoral Dissertation Research Presentation Competition
Poster Presentation Competition
Simulation Competition
Computer-Aided Engineering (CAE) Workshop using Hypermesh  
September 24, 2016 (Saturday), Time: 9:00 am – 5:00 pm

DM Noor Ruhul Alam  
Design Release Engineer  
General Motor Technical Center  
Warren, Michigan

This workshop will cover Finite Element Analysis (FEA) using Hypermesh as pre and post processor. Topics are the following:

- Basic understanding of liner and non-liner finite element analysis
- Types of element used
- Basic frequency analysis
- Case study of a linear static analysis using OPTISTRUCT code
- Case study of a frequency analysis using OPTISTRUCT code
- Case study of a dynamic analysis using LS DYNA

Biography: Mr. Noor Ruhul Alam is a design release engineer at General Motors. He is currently working with Headliners and Garnish Product. Previously Mr. Alam worked as Issue Resolution Team Co-chairman (Interior) during 2013 –2015 at Arlington plant, Texas and Detroit Hamtramck Plant of General Motors. He was a CAE Engineer at General Motors during 2000 – 2013. He has worked on Computer Aided engineering (System level and Full vehicle level) for best practice and government required criteria in terms of stiffness and safety regulation for multiple SMT like Closure, Exterior and Interior. Mr. Alam has used many CAE tools for analysis including: HYPERMESH Pre and Post Processor, HYPERVIEW (post processor), HYPERGRAPH, LS-DYNA Pre and Post Processor, Primer Pre Processor, Solver code: NASTRAN, ABAQUS, OPTISTRUCT, LS-DYNA, UNIGRAPHICS, and Vis Mock Up. He has received Master of Engineering in Mechanical Engineering from University of South Alabama, Mobile, USA and BS in mechanical engineering from Khulna University of Engineering and Technology (KUET), Bangladesh.

Entrepreneurial Mindset: Opportunity Recognition & Value Proposition  
September 25, 2016 (Thursday), 2:00 pm – 6:00 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 invited 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.

Professor Donald M. Reimer  
Adjunct faculty – A. Leon Linton Department of Mechanical Engineering  
Lawrence Technological University, Southfield, Michigan, USA

Donald M. Reimer is an adjunct faculty at the A. Leon Linton Department of Mechanical Engineering in College of Engineering at Lawrence Tech in Southfield, Michigan. He coordinates the Certificate of Entrepreneurial Engineering Skills. Mr. Reimer holds a Bachelor of Science degree in Industrial Management from Lawrence Technological University and a Master of Arts degree in Political Science from University of Detroit/Mercy. He is a Certified Management Consultant with over 35 years of experience in working with closely-held businesses. He has taught courses in entrepreneurship, strategic management, corporate entrepreneurship and innovation for engineers. Mr. Reimer is a member of the Lawrence Tech Kern Campus Committee, Coordinator of the Lawrence Tech Innovation Encounter. He is faculty Advisor of the Collegiate Entrepreneurs’ Organization. Mr. Reimer serves as a Kern Fellow of The Kern Family Foundation, Co-Director of the Coleman Fellows Program, member of the National Collegiate Entrepreneurs’ Organization Faculty Advisory Council and is a member of the American Society of Engineering Education.

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.
“Re-Think Continuous Improvement Curriculum: One Day Training”

Larry Frydrych, a Lean Continuous Improvement Trainer and Coach for Health Alliance Plan (HAP), will provide insights into HAP’s Lean journey. Larry will share how HAP created and implemented an engaging and educational curriculum to train the entire workforce by using a one day, Lean Continuous Improvement class over a five year period.

In 2014, HAP chose a corporate paradigm shift for utilizing Lean continuous improvement. With the acquisition of HealthPlus and Midwest, the company grew to over 1,000 employees. HAP’s goal was to equally train the entire workforce (everyone from the front-line supervisors up through the corporate leadership). In this case study, Larry will talk about how training was setup, trainees and trainers were selected, and share the lessons learned.

Larry Frydrych has successfully worked with every layer of management, including the senior level, in process improvement, implementing and utilizing the Huddle System, Rapid Redesigns, Kaizen, Value Stream Mapping, A3 and other lean tools. His business experience includes sixteen years in the healthcare industry, mostly as a Project Manager, and ten years of international experience in the commercial construction and code requirements industry. Larry holds a Bachelor of Science in Economics and is trained in MLC Bronze and Six Sigma Green Belt. After successfully passing his MLC Bronze test, he began studying for his MLC Silver certification.

Directions: Lawrence Technological University is located on 10 Mile Road, west of Evergreen Road. Easily accessible from I-696 by taking M-10 (Northwestern Highway/Lodge Freeway) exiting at Ten Mile Road/Evergreen Road. Turn west onto Ten Mile Road. The campus entrance is on the right. Signs will help direct you to the Science Building, Parking Lot “D”. Public parking is available in the campus lots.

Admission is FREE!

RSVP to: tinyurl.com/hkg98t6
for food count by October 17th!!

Questions: Contact Steve Sibrel 248-760-8252
www.asqdetroit.org
The International Journal of Industrial Engineering and Operations Management (IJIEOM) aims to publish primary high-quality research work in the field of industrial engineering and operations management (IEOM) for academics, researchers and practitioners to advance the theory and practice as well as to identify major trends in industrial engineering and operations management. The journal is expected to foster worldwide IEOM communities publishing in-depth research oriented papers with wide variety of problems related on real-life applications and research which affect in international levels.

IJIEOM covers academic research and industrial issues/applications related on fundamentals of industrial engineering and operations research, supply chain management, logistics, systems and service engineering, reliability and quality, modeling, simulation and optimization, and artificial intelligence. The application areas include manufacturing, healthcare, energy, transportation, financial, and business operations. Articles must have scientific research contribution with state-of-the-art review.

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A Special Issue of IJIEOM will be published from the selected papers of IEOM Detroit Conference, September 23 – 25, 2016.

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IEOM Detroit Conference

International Symposium on Industrial Engineering and Operations Management
July 25-26, 2017, Bristol, UK

Venue: The University of the West of England

www.ieomsociety.org/ieomuk/

Theme: “The Challenge of Industrial Engineering and Operations Management in Building Sustainable Manufacturing and Service Systems”

Organised by: University of Derby and University of the West of England

Symposium Chairs: Dr. Jose Arturo Garza-Reyes, Derby Business School, University of Derby, UK
Dr. Vikas Kumar, Bristol Business School, University of the West of England, UK

Technical Sponsor: IEEE

Full papers will be published in IEEE Xplore subject to quality and follow IEEE guidelines.

IEOM Bogota Conference

International Congress on Industrial Engineering and Operations Management
October 25-26, 2017, Bogota, Colombia

Host University: The Universidad del Rosario

International Congress on Industrial Engineering and Operations Management
Bogota, Colombia, October 25-26, 2017

Host: University de Rosario – Bogota

www.ieomsociety.org/ieombogota/

Theme: “The Global Challenges and Opportunities of Supply Chain and Industrial/Production Engineering”

Organized by: University de Rosario, IEOM Society of Colombia and IEOM Society International

Conference Chair:
Sandra Milena Chacon Sanchez
Directora del Programa de Administración de Empresas
Directora programa de Administración en Logística y producción
Universidad del Rosario
Bogota, Colombia

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