



IEOM Society

"Achieving and Sustaining Operational Excellence"

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2016 IEOM Awards – Detroit

September 24, 2016 (Lawrence Technological University)

IEOM Global Diversity Award

- SIEMENS

IEOM Spirit Award

- Lawrence Technological University

IEOM Distinguished Industry Awards

1. **Mr. Carlo Materazzo**, Head of World Class Manufacturing (WCM) – Global, Fiat Chrysler Automobiles (FCA)
2. **Dr. Helmuth Ludwig**, Executive VP, Digital Enterprise Realization and Chief Manufacturing Officer - SIEMENS PLM
3. **Dr. Jeffrey Abell**, GM Technical Fellow, Lab Group Manager, Manufacturing Systems Research, General Motors Global Research and Development, Warren, Michigan
4. **Aaron Rubel**, Engineering Lead of Cabin & Cargo Standard Parts, Flammability Certification, & Mass Properties , Airbus Americas, Mobile, Alabama, USA
5. **Mr. Kevin Poet**, Plant Manager, Rawsonville Component Plant, Ford Motor Company, Ypsilanti Michigan
6. **John Fleming**, Executive VP Manufacturing and Labor Affairs (retired), Ford Motor Company
7. **Richard D. Shainin**, Executive Vice President, Shainin, The Red X Company, Washington, D.C., USA
8. **Mr. Larry Bennett**, Director of Engineering, Technology and Innovation, Eaton Corporation, Southfield, Michigan

IEOM Distinguished Educator Awards

1. **Dr. Srinivas R. Chakravarthy**, Professor and Department Head, Industrial and Manufacturing Engineering, Kettering University, Flint, Michigan, USA
2. **Dr. Mark S. Daskin**, Clyde W. Johnson Collegiate Professor and Chair, Industrial & Operations Engineering, University of Michigan, Ann Arbor
3. **Dr. Hoda ElMaraghy**, Canada Research Chair (CRC) in Manufacturing Systems and Professor of Industrial & Manufacturing Systems Engineering Department, University of Windsor, Ontario, Canada
4. **Dr. Andrew K.S. Jardine**, Professor Emeritus, Industrial Engineering, University of Toronto, Canada
5. **Dr. Leslie Monplaisir**, Department Chair, Industrial and Systems Engineering, Wayne State University, Detroit, Michigan

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6. **Dr. Robert Van Til**, Professor and Chair, Industrial and Systems Engineering, Oakland University, Rochester, Michigan

IEOM Distinguished Service Awards

1. **Steven Sibrel**, Sr. Supplier Quality Engineer, Harman International, Novi, Michigan
2. **Dr. Dan Steffy** (President - INFORMS Southeastern Michigan Chapter), Mathematics & Statistics, Oakland University
3. **Dr. Devdas Shetty**, School of Engineering and Applied Science, University of the District of Columbia, Washington, DC
4. **Professor Paul Nutter**, Associate Professor and Dept. Chair, Dept. of Technological Studies, Ohio Northern University, Ada, OH
5. **Dr. Mohammad Rahman**, Manufacturing & Construction Management, Central Connecticut State University
6. **Dr. Taufiqul Islam**, Conference Secretariat – IEOM Detroit Conference

IEOM Industry Solutions Awards

1. **Edly Ferdin Ramly**, Certification Director, EFR Certification, Johor Bahru, Malaysia
2. **Mohammad Hijawi**, Technical Fellow - Powertrain Quality Reliability Engineering, Chair – FCA US Technical Council, Fiat Chrysler Automobiles (FCA), Auburn Hills, Michigan
3. **Prabhu Patil**, President & CEO, Prolim Corporation
4. **Mark Dolsen**, President, TRQSS, Tokai Rika Group, Tecumseh, ON, Canada

IEOM Global Engineering Education Awards

1. **Dr. M. Abbot Maginnis**, Lean Systems Program Academic Coordinator & Director of Certificate Studies, University of Kentucky, Lexington, KY
2. **Adedeji B. Badiru**, 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
3. **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

IEOM Outstanding Service Awards

1. **Saso Krstovski**, Test Engineer, Ford Motor Company
2. **Mohammad Sadegh Mobin**, Western New England University, Springfield, MA, USA
3. **Dr. Rajendra Patil**, Professor at TSSM's Padmabhooshan Vasantdada Patil Institute of Technology Bavdhan, Pune, Maharashtra, India
4. **Dr. Chandra K Jaggi**, Professor, Department of Operational Research, Faculty of Mathematical Sciences, University of Delhi, Delhi - 110 007, India

IEOM Woman in Industry and Academia Award

1. **Dr. Rashmi Jha**, Associate Professor, Gitarattan International Business School, Guru Gobind Singh Indraprastha University, New Delhi, India

Outstanding Track Chair Awards

1. **Afshan Roshani**, Western New England University
2. **Mohammad Dehghani**, Northeastern University

IEOM Ambassador Awards

Dr. Abdur Rahim, Professor of Quantitative Methods, Faculty of Business Administration, University of New Brunswick, Fredericton, NB, Canada

Professor Don Reimer, Lawrence Technological University,

IEOM Special Diversity Award

Hulas King, Director of Diversity, Professional Affiliations and Global Community Relations, Siemens PLM Software, Maryland heights, MO

IEOM Special Recognition Award

Dr. Daw Alwerfalli, Professor and Director Master of Engineering Management, A. Leon Linton Dept. of Mechanical Engineering, Lawrence Technological University

Dr. Sree Raghavan, Associate Professor, College of Management, Lawrence Technological University

Dr. Yahaya Yusuf, Director of the Institute of Logistics and Operations Management, University of Central Lancashire, UK

Viktorii Butenko, Karlsruhe Institute of Technology, Germany

Odd Myklebust, Department of Production and Quality Engineering, Norwegian University of Science and Technology, Norway

Dr. Abdullah Alrabghi, Industrial Engineering, University of Jeddah, Saudi Arabia

Dr. Charles Mbohwa, Professor and Vice-Dean Postgraduate Studies, Res. & Innovation, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

Dr. Abdul Talib Bon, UTHM- Malaysia

Outstanding Student Awards

Suvro Sudip, IEOM Web Coordinator, Recent graduate of LTU (Double major – EE & CS)

Venkata Rajasekhar Gandavarapu, President – SME Student Chapter at LTU (MSIE)

Ana Magana, Student – B.S.I.E., Athletic Program - WOMEN'S GOLF, Lawrence Tech University

Undergraduate Student Research Competition Awards Sponsored by **SIEMENS**

1st Place

Plasma Engineered Anti-Oxidant Surfaces as Novel Food Packaging Material

Dominic Flaig and Ali R. Zand, Kettering University, Flint, MI

2nd Place

Growth of Food Tech: A Comparative Study of Aggregator Food Delivery Services in India

Mohan Khond, Mustafa Abbas, Harsh Balihallimath and Nishant Bidichandani, College of Engineering Pune, Maharashtra, India

3rd Place

Continuous Improvement using Time Study and Lean Manufacturing - A Case Study

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Ana Magana, Industrial Engineering Program, A. Leon Linton Dept. of Mech. Engineering, Lawrence Technological University

Graduate Student Paper Competition Awards sponsored by EATON Corporation

1st Place

Optimization model for scheduling emergency operations with multiple teams

Behrooz Bodaghi and Palaneeswaran Ekambaram, Swinburne University of Technology, Hawthorn, Victoria, Australia

2nd Place

An ILP Model for Healthcare Facility Location Problem with Long Term Demand

Ruilin Ouyang, Tasnim Ibn Faiz and Md Noor-E-Alam, Northeastern University, Boston, MA

3rd Place

An Intuitionistic Fuzzy-Based DEMATEL to Rank Risks of Construction Projects

Amin Vafadarnikjoo, Department of Management and Accounting, Allameh Tabataba'i University, Tehran, Iran
Mohammadsadegh Mobin, Dept. of Industrial Engineering and Engineering Management, Western New England University, Springfield, MA, USA
Seyyed Mohammad Ali Khatami Firouzabadi, Department of Management and Accounting, Allameh Tabataba'i University, Tehran, Iran

Dissertation Presentation Competition Winner Awards

1st Place

Multi Objective Optimization of Distributed Energy Systems Considering Renewable and Fossil Fuel Resources

Azadeh Maroufmashat, University of Waterloo, Canada

2nd Place

Developing a new Iterative Optimization-based Simulation (IOS) model with Predictable and Unpredictable Trigger Events in Simulated Time

Mohammad Dehghanimohammadabadi, Northeastern University, Boston, Massachusetts, United States

3rd Place

Strategies and Techniques to Enhance Productivity in North American Automotive Industry

Amir Abolhassani, West Virginia University, Morgantown, WV, United States

Reliability Modeling and Optimization of New product Development Process

Mohammadsadegh Mobin, Western New England University, Springfield, MA, United States

Best Poster Awards

1st Place

Wasserstein distance and the distributionally robust TSP

Mehdi Behroozi, University of Minnesota-Twin Cities
John Carlsson, University of Southern California

2nd Place

Applications of Lean Methodologies and Quality Improvement in Textile Industry

Ahmad Yame and Daw Alwerfalli, Lawrence Technological University

3rd Place

Stochastic Hierarchical Approach for Master Surgical Scheduling

Mohammed Baki, Justin Britt, Ahmed Azab, and Ben Chaouch, University of Windsor, Canada
Xiangyong Li, Tongji University, Shanghai, China

Slack Variable Approach for Mixture Experiment

Javier Cruz-Salgado, Research and Technological Development Dept., Universidad Politécnica del Bicentenario, Silao, Gto, México

Best Track Papers Awards

Because of the diversity of the research, entries of real case examples and quality reporting in the papers, it was a very hard decision to select the finalists in each track by our panel of judges. After considering all entries the following papers were awarded for the IEOM Detroit 2016 Track Best Papers Awards. The awards will be presented at the award dinner of the IEOM Conference in Detroit on Saturday, September 24, 2016.

Artificial Intelligence

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, Department of Industrial Management Engineering, Korea University, Seoul, South Korea

Manufacturing and Design

ID 346 Design of an automatic tire pressure inflation system for small vehicles

Tawanda Mushiri, Department of Mechanical Engineering, University of Johannesburg, South Africa
Allan T. Muzhanje, Dept. of Mechanical Engineering, University of Zimbabwe, Mt Pleasant, Harare, Zimbabwe
Charles Mbohwa, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

Case Studies

ID 250 An integrated MOEA and MCDM for multi-objective optimization (Case study: control chart design)

Samrad Jafarian-Namin, Industrial Engineering Department, Faculty of Engineering, Yazd University, Yazd, Iran
Mohamad Amin Kaviani, Department of Industrial Engineering, Shiraz branch, Islamic Azad University, Shiraz, Iran
Elaheh Ghasemi, Aghigh Institute of Higher Education, Shahinshar, Isfahan, Iran

Construction Management

ID 254 An Environmental Impact Framework for Evaluating Construction Projects Delays

Richard Hannis Ansah, Shahryar Sorooshian and Shariman Bin Mustafa, Faculty of Industrial Management (FIM), Universiti Malaysia Pahang, Lebuhraya Tun Razak, Kuantan Pahang, Malaysia

Data Analytics

ID 328 Data Analytics and Visualization in Analyzing Mortality Records

Mehul R Patel and Md. Noor-E-Alam, Department of Mechanical and Industrial Engineering, Northeastern University, Boston, MA, USA

Decision Sciences

ID 315 Supply Chain Resilience Assessment: A Grey Systems Theory Approach

Mohamad Amin Kaviani, Department of Industrial Engineering, Shiraz branch, Islamic Azad University, Shiraz, Iran
Mohammad Sadegh Mobin, Department of Industrial Engineering and Engineering Management, Western New England University
Eleonora Bottani, Department of Industrial Engineering, University of Parma, Parma, Italy

Design and Analysis

ID 284 Design of Experiments and Web Page Designs: Theories and Applications

Lihui Shi, Centerfield Media, El Segundo, CA, USA
Bo Li, School of Arts, Wuhan Sports University, Wuhan, Hubei, China

ID 338 Predictive Control Design of Gas Turbine Using Multi-Objective Optimization Approach

Kamal Jafarian, Biosignal Processing Lab, Department of Biomedical Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran

Mohammadsadegh Mobin, Department 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

E-Business/E-Commerce

ID 258 Econometric models for decision making in IT services

Martha M Cuellar Chavez, Faculty of the International Business, San Mateo Educación Superior, Bogotá, Colombia

Joaquín F Sánchez, Faculty of the Telecommunications Engineering, San Mateo Educación Superior, Bogotá, Colombia

e-Manufacturing

ID 233 Computer Aided Process Planning Approach for Cost Reduction and Increase in Throughput

Omar Al-Shebeeb and Bhaskaran Gopalakrishnan, Department of Industrial and Management Systems Engineering, West Virginia University, Morgantown, WV, USA

Energy

ID 172 Experimental Analysis of Power Consumption in Ceiling Fan

Rupesh Bhortake and Vaishali Bhortake, TSSM's PVPIT, Bavdhan, Pune, Maharashtra, India

Engineering Education

ID 042 Improving Quality of Technical Education by Quality Function Deployment (QFD)

Mohan Khond, Shrinivas Patil, Swapnil Sonawane, Chaitanya Shrishrimal and Aarti Bhattu, College of Engineering Pune, Maharashtra, India

Engineering Management

ID 210 Investigating the relationship between team-working and production agility in manufacturing organizations

Donya Nader & Abbas Mahmoudabadi, Department of Industrial Engineering, MehrAstan University, Gilan, Iran

Healthcare Operations and Services

ID 241 Process Improvement Approach to Investigate Low Block Utilization of Operating Rooms: A Case Study

Omar Ashour and Faisal Aqlan, Industrial Engineering Department, Pennsylvania State University, The Behrend College, Erie, PA 16563, USA

Anne Pedersen, UPMC Hamot, Erie, PA 16550, USA

Lean

ID 239 An Investigation of Lean Manufacturing Implementation in Textile Industries of Pakistan

Zahid Abbass Shah and Hadia Hussain, Institute of Quality and Technology Management, University of the Punjab, New Campus, Lahore, Pakistan

ID 180 Effects of Human Stress on Reliability of Lean Systems – a Markovian Approach

Roshanak Akram, Rupy Sawhney and Vahid Ganji, Department of industrial and Systems Engineering, University of Tennessee, Knoxville, TN, USA

Modeling and Simulation

ID 160 Design optimization of an electrolytic hydrogen for the Sarnia-Lambton upgrader

Mohamed Elsholkami, Alexander McKenzie, Reena Paink, Kendra White, Ali Elkamel, and Michael Fowler, Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario, Canada

ID 161 Design optimization of a microreactor for the production of biodiesel

Mohamed Elsholkami, Timothy Cumberland, Nathan Molyneaux, Stephen Wei, Nicolo Zambito, Ali Elkamel, and Chandra Mouli Madhuranthakam, Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario, Canada

Operations Research

ID 184 An optimization model for scheduling emergency operations with multiple teams

Behrooz Bodaghi and Ekambaram Palaneeswaran, Faculty of Science, Engineering and Technology, Swinburne University of Technology, Hawthorn, Victoria, Australia

Project Management

ID 234 Considering the time value of money for modeling the risk assessment of cost and time components in construction projects

Abbas Mahmoudabadi, Department of Industrial Engineering, MehrAstan University, Gilan, Iran
Roghaye Mousazade, Construction Engineering and Management, Islamic Azad University, Branch of South Tehran, Tehran, Iran

Quality

ID 326 Optimisation in Cutting Down Parameters for Industrial Bamboo

Hari Agung Yuniarto and Mrs. Kurniawanti, Industrial Engineering, Faculty of Engineering, Universitas Gadjah Mada, Yogyakarta, Indonesia, 55281.

Reliability

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

Six Sigma

ID 303 Optimization of Thermal Profile Process in Assembly Line of Printed Circuit Boards (PCB) Using Design of Experiments

Kamal Alzamel and Daw Alwerfalli, Lawrence Technological University, Southfield, Michigan, USA
Ahmed Alsamarai, Product Development Center, Ford Motor Company, Dearborn, Michigan, USA

Sustainability and Green Systems

ID 251 Warranty Analysis of Remanufactured Electrical Products

Wilkistar Otieno and Yuxi Liu, Department of Industrial and Manufacturing Engineering, University of Wisconsin-Milwaukee, Milwaukee, WI, USA

Transportation and Traffic Track

Public Transport Development Strategy in Supporting Centres Industrial Area at the Mamminasata Corridor

Adris.A.Putra, Usman Rianse, Samdin, and La Ode Muh Magribi, Haluoleo University, Kendari, Indonesia