

# GD&T (Geometric Dimensioning and Tolerancing) Workshop

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

Lawrence Tech Campus (Engineering Building), Southfield, Michigan

**Workshop Chair: Saso Krstovski, Ford Motor Company**  
**Workshop certificate will be provided and CEU is available.**

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## 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 Maqsood 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 TechStudies - 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
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- Material Conditions (MMC, LMC, RFS)
- Parallelism
- Perpendicularity
- Position
- Profile
- Runout (Circular / Total)
- Straightness
- True Position

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### Speaker Bios



#### **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.

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#### **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 GDT 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

GDT training materials, and consults with engineers and designers daily on GDT application and drawing related standards issues. She has a BS in Industrial Administration and a Leadership Certification from Central Michigan University.

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#### **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.

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### **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:

Specialties: Shainin Red X ~ Black Belt, Leica Laser Tracker Programmer, CMM programmer, Auto, Aero, Nanotechnology, Hybrid Tech, Solar cell, FMS, ProEngineer and AutoCAD, Assembly and Fixture Design, Advanced GD&T, FEA, CP-CPk, Process, CI, ANOVA, Allen Bradley PLC, Kaizen, Ishikawa, Hoshin and Taguchi Methods, Robotic Systems, NPI, Process Optimization. DFA/DFM, Lean Principle with Six Sigma, Kaizan, System Integration, Analytical Modeling, CAD & CAE Software, Benchmarking, Budgeting, Statistical Analysis, Process Capability, DVP, PPAP, DOE, APQP,



### **Dr. Joseph M. Ogundu, MBB**

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

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

several companies to save millions of dollars through lean implementation and continuous improvement execution.

Dr. Ogundu has worked with companies in the oil and gas, automotive and non-automotive industries to develop and execute turnaround and restructuring strategies including reengineering of business processes for maintaining competitive advantage and sustainment of organizational viability. Dr Ogundu was an employee or consultant for the following companies; General Motors Corporation, Ford Motor Company, Chrysler Corporation, Daimler Chrysler AG., Country Coach Inc., ESTG Inc., Park Ohio, General Aluminum Company, Argo Inc, Suncor Energy Inc, Nobel Automotive, Finer Cabinetry & Woodwork, Bend River Sash Door Company, Morgan Fine Finishing, Magna Corporation, Axis Manufacturing, Trim-X Technologies, Oakland University and Lawrence Tech University.

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

Technological College of Management Alumni, Chrysler African American Network, Institute of Industrial Engineers South Eastern Michigan/Ohio Zone, Finer Cabinetry and Woodwork Inc., World Igbo Congress, Rivers State Foundation.



**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, SSBP**  
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.

Specialties: Team Development, Standards Development, Process Development, Project Management, CAD Design, Blueprint Reading, GD&T Fundamentals, GD&T Advanced Concepts, Functional Gage Design, Part and Assembly Inspection, and Tolerance Stackup Analysis.



**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. Knowledge of GD&T is imperative to success in most of the mechanical/industrial fields. 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](http://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.



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

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### **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, Whitlam 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, IISE, INFORMS, SME and IEEE.

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# Lean Six Sigma Workshop

LAWRENCE TECH, Southfield, Michigan  
September 24-25, 2016 (Saturday & Sunday), Time: 8:00 pm – 5:00 pm  
SIX SIGMA AND LEAN GREEN BELT CERTIFICATION

## Agenda

### 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).

# 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 OPTISTRUC code
- Case study of a frequency analysis using OPTISTRUC 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, OPTISTRUC, 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

March 10, 2016 (Thursday), 2:00 pm – 8:00 pm

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



### SPEAKER

## Professor Donald M. Reimer

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

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

Mr. Reimer has served as an adjunct faculty member at Lawrence Technological University for over twenty-years. He has operated his own consulting company – The Small Business Strategy Group for 23 years. He published numerous articles on small business, entrepreneurship and strategic thinking. Mr. Reimer conducted workshops and seminars for trade associations, chamber of commerce organizations and private companies. He has received several awards and recognition by local, state and federal agencies for his work in entrepreneurship and minority business development. Mr. Reimer served as member of the Minority Economic Development Committee of New Detroit. Mr. Reimer is member of the Small Business Advisory Council of the Detroit Regional Chamber of Commerce. Mr. Reimer is a member of Advisory Board of the Milwaukee Junction Small Business Assistance Center. He is also a member of the Applied Innovation Alliance. Mr. Reimer serves as a KEEN Fellow for The Kern Family Foundation and is a member of United States Association of Small Business and Entrepreneurship.



## International Journal of Industrial Engineering and Operations Management (IJIEOM)

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.

**IJIEOM is a flagship journal of IEOM Society International.**

### Editorial Board

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

## IEOM Lean Six Sigma Certification

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## IEOM Foundation for Humanity

IEOM Foundation helps disadvantaged students and schools for K-12 education in underdeveloped and developing countries. Students and schools can get direct support from the IEOM Foundation.