

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 Shahrniza Bt Tengku Abdul Jalal

Head of Intensive English Language Programme
Multimedia University, Malaysia

Workplace English: An Analysis of Communication Needs

Tengku Shahrniza 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 Shahrniza 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 has been conducting corporate courses on English Language, Customer Service, Report Writing, Business Communication, Presentation Skills, Grooming, Ethics and Protocol for clients like Nestle, Bursa Kuala Lumpur, Felda, Sime Darby, Guthrie, Golden Hope Plantations, Malaysian Palm Oil Board, United Engineers Malaysia, AZRB, Kontena National, Telekom, Tenaga Nasional, Royal Malaysian Police, Risda, Royal Malaysian Navy, Malaysian Handicraft Development Corporation, JTM, Ministry of Higher Education, Malaysia External Trade Development Corporation (MATRADE), Airod and Aero Precision Resources - Aviation Training Center.

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 Corpenicus.

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.

8:50 – 9:15 (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.

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)



Adedeji B. Badiru, Ph.D., PE, PMP, FIIIE

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 (IIE), 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

2:55 - 3:20 (Friday)



Dr. M. Abbot Maginnis

Lean Systems Program Academic Coordinator &
Director of Certificate Studies
University of Kentucky, Lexington, KY

Dr. Maginnis has more than twenty years of experience in industry and is currently an instructor in the internationally renowned Lean Systems Program at the University of Kentucky and adjunct assistant professor in the College of Engineering.

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.

3:20 - 3:45 (Friday)



Dr. Jayant Trewn, Fellow ASQ

Adjunct Faculty - A. Leon Linton Department of Mechanical Engineering
Lawrence Technological University
Southfield, MI 48075, USA

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 Beaumont Hospitals, Spectrum Health Medical Group, 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 and implementing Lean Six Sigma training and certification 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 three books, Kaizen Demystified, 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.



Dr. Lynn Miller-Wietecha

eLearning Architect and Program Producer
Department of eLearning
Lawrence Technological University
Southfield, MI 48075, USA

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.

4:50 – 5:15 (Friday)



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, University 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 interdisciplinary 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 year 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 textbooks 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.

He is the recipient of academic and research grants from organizations like National Science Foundation, Society of Manufacturing Engineers, US Army, Air force etc.

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.

12:20 – 12:45:



Dr. Mohammad Miftaur Rahman Khan Khadem

Assistant Professor
Department of Mechanical and Industrial Engineering
Sultan Qaboos University
Muscat, Oman

Dr. Miftaur Rahman Khan Khadem He has been working in the department of MEIE as an assistant professor of Industrial Engineering at Sultan Qaboos University of Oman. He has vast experience in ABET accreditation and curriculum development. His research area in the field of manufacturing system, OHS, ergonomics and supply chain management. He has published over thirty peer reviewed Scopus indexed Int. Journal and conference articles. He is the Executive director of IEOM society International. He served as a program chair of annual IEOM conference. Dr. Khadem has received PhD in Industrial and Manufacturing Engineering in 2004 from University of Wisconsin Milwaukee. MS in Mechanical Engineering from USA and BS in ME from BITK (KUET) 1997.

Session VI: Global Engineering Education

Room - Engineering Building E200, 2:30 – 3:45 pm

Session Chair: Dr. Srinivas R. Chakravarthy, Kettering University, Flint, Michigan, USA

2:30 – 2:55 (Saturday)



Dr. Srinivas R. Chakravarthy

Professor and Department Head
Industrial and Manufacturing Engineering
Kettering University
Flint, Michigan, USA

Dr. Chakravarthy is Professor and Head of the Department of Industrial and Manufacturing Engineering at Kettering University (formerly known as GMI Engineering & Management Institute), Flint, Michigan. He received his BS (Mathematics) and MS (Statistics) degrees from the University of Madras, India, and Ph.D (Operations Research) from the University of Delaware, Newark, USA.

Dr. Chakravarthy's research interests are in the areas of algorithmic probability, queuing, reliability, inventory, and simulation. He has published more than 100 papers in leading journals and made more than 85 presentations at national and international conferences. Recognizing the impact of Neuts' Matrix-analytic methods in stochastic models, he initiated the organization of International Conference Series on Matrix-Analytic Methods (MAMs) in Stochastic Models. He co-organized the First International Conference on MAMs in Stochastic Models in 1995 held in Flint. Following the success of this conference and interests shown in the MAMs research community, the next seven conferences were held in Winnipeg, Canada (1998), Leuven, Belgium (2000), Adelaide, Australia (2002), Pisa, Italy (2005), Beijing, China (2008), New York, USA (2011), Calicut, India (2014). The ninth one is slated to be held in Budapest, Hungary (2016). 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, 1990; (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 1996 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. Harun Rashid is the Director of Staff Mentoring and Coaching, Hamadeh Educational Services, Dearborn Heights, MI (Serving Star International, Universal, Universal Learning, and Noor International Academies) since 2011. He was Principal of Frontier International Academy (Grades 6-12) from 2005-2011. Dr. Rashid was an Assistant Principal & Principal, The Dearborn Academy (Grades K-8) from 1997-2005. He was an Assistant Director, MAT Program, Marygrove College, 1995-1997. Dr. Rashid was Principal, Darul Arqam Islamic School, Detroit, 1993-1995 and Educational Assistant, Huda School, 1989-1993. He is an adjunct faculty at WSU College of Education since 1994 and Wayne County Community College since 1995. He was a lecturer in Philosophy, Dhaka & Chittagong University, Bangladesh 1978-1983.

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-Ikhlis 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.

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.

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