

Conference Program ICAM 2008

Day 1	Wednesday, July 16 th , 2008
8:30 – 10:30 AM Keynote Session <i>S11</i> Room D109	Welcome by Paul Engelmann, Chair Industrial and Manufacturing Department, Western Michigan University Opening of the ICAM by Alok Verma <i>President of the International Society of the Agile Manufacturing</i> Opening Session Keynote Speaker- Bernard J. (Buzz) Brosnan - <i>Industrial Consultant</i>
10:00 – 10:30 AM	Coffee break
10:30 – 12:00 PM <i>Session S12-a</i> Room D210	Sustainable CIO Program for Agile Manufacturing Chair: Tarun Gupta 1. Continuous Improvement Techniques in Testing of Foundation Brakes <i>Brian Cavanaugh, Jaishree Jayachandran, Pongson Chunsorn, and Srinivas Ghattamaneni</i> 2. Process Improvement in F16/F26 Filter Line at Parker Hannifin <i>Aarti Valsadia, Ananda Paudel, Jonathan Opel, and Krisana Guitierrez</i> 3. Application of SMED Technique in Injection Molding Press at MANN + HUMMEL <i>Beau Kidman, and Jack Thom</i> 4. Increasing Production by Applying Continuous Improvement Principles in an Automotive Battery Facility <i>Abdul Aowal, Amir Rahimpour Shayan, Ariful Bhuiyan, and Gunnar Bracelly</i> 5. Lean Initiatives with Process Improvement at Eaton Aerospace Division <i>Dan Smith and Tarun Gupta</i>
10:30 – 12:00 PM <i>Session S12-b</i> Room D212	Application of Simulations and Virtual Reality Technologies Chair: Pavel Ikonomov 1. AFM in Nano-Manipulation Virtual Modeling and Simulation <i>Ananda Paudel and Pavel Ikonomov</i> 2. Multi-sensor Based Recognition of Moving Objects for Robotic Applications <i>Emiliya Milkova and Pavel Ikonomov</i> 3. Virtual Reality Simulation of Nano Assembly Using Optical Tweezers <i>Krishna Bhavaraju, Svetlana Ikonomova, Suren Dwivedi, and Pavel Ikonomov</i> 4. Measuring and Modeling of a 3D Road Surface <i>Pramod Bejugam, Pavel Ikonomov, and Suren Dwivedi</i>
12:00-1:30 PM	Lunch break
1:30 – 3:00 PM <i>Session S13-a</i> Room D210	Manufacturing Optimization Chair: Svetan Ratchev 1. Optimization of Hot Extrusion Process for Agile Manufacturing Using Neuro Fuzzy Hybrid Evolutionary Computational Technique <i>K. Hans Raj, Rahul Swarup Sharma, and Alok Verma</i> 2. A Publish/Subscribe Approach For Software Framework For Reconfigurable Fixturing Systems <i>Marco Ryll and Stevan Ratchev</i> 3. Preform Design and Optimization in Hot Upsetting Process to Minimize Central Bulge For Agile Manufacturing <i>Rahul Swarup Sharma, K. Hans Raj, and Suren Dwivedi</i> 4. Virtual Reality Based Simulation and Testing – One Step Closer to the Real Product <i>Emiliya Milkova and Pavel Ikonomov</i> 5. Magnetic Shape Memory Alloys -- The Smart Material of Tomorrow <i>Pnina Ari-Gur, Giora Kimmel, James W. Richardson, and Ashfia Huq</i>
1:30 – 3:00 PM <i>Session S13-b</i> Room D212	Reverse Engineering, Verification and Applications Chair: Mitchel Keil 1. Inspection Tolerance System <i>Emiliya D. Milkova and Pavel Ikonomov</i> 2. Automating Modeling in CAD Software Using Descriptive Geometry <i>Jai Thomas and Mitchel Keil</i>

	<ol style="list-style-type: none"> Some Factors in Selecting Scan Technology <i>Mitchel Keil and Jorge Rodriguez</i> Specifying a system of criteria for evaluation of tribology performances of contacting surfaces <i>Dimitar S. Georgiev</i> <i>Use of Inverse Engineering to Determine Flow Stress in Forming Composite Sheet Materials at Various Temperatures</i> <i>Sathya Narasimhan and Jorge Rodriguez</i>
3:00– 3:30 PM	Coffee Break
3:30 - 5:00 PM <i>Session S14-a</i> Room D210	Rapid Prototyping and casting Chair: Sam Ramrattan <ol style="list-style-type: none"> Full Scale Functional Cast Prototypes Pavel Ikononov and Sam Ramrattan The Effect of Elevated Temperature on 3D Printed Sand Sam Ramrattan and Pavel Ikononov A Quick Test for Measuring Moisture and Organics in Foundry Sand Sam Ramrattan and Pavel Ikononov Improvements in Molding Technology using Aerated Green Sand Filling <i>Ananda Paudel and Sam Ramrattan</i> Piezo-electric Head Application in a New 3D Printing Design <i>Rahmati, S., Baghayeri, and S.F. Shirazi</i>
3:30 - 5:00 PM <i>Session S14-b</i> <i>(Student)</i> Room D212	Student Projects Chair: Supreeta Amin Kumar <ol style="list-style-type: none"> Evaluation of Utility Covers <i>Supreeta Amin-Kumar, Tycho K. Fredericks, Steven E. Butt, Sam N. Ramrattan, and Anil R. Kumar</i> Particle Swarm Optimization for Facility Layout Problems with Department-Specific Restrictions <i>Fehime Utkan and Muzaffer Kapanoglu</i> Evaluation of Golf Bag Design on Trunk Posture <i>Michael Hoonhorst, Ilgin Acar, Sarvan Gunasekaran, Gregory Love, and Steven E. Butt</i> Two-Point Discrimination Thresholds on the Ischial Tuberosity and Thigh Regions of the Non-Dominant Leg <i>Amanda Glick, Ashley Hovenkamp, Fehime Utkan, Oscar Neal, Tycho Fredericks, Steven Butt, and Supreeta Amin-Kumar</i> Standard Operating Procedures for Random Time Studies <i>Stephanie Means, Steven Butt, and Tycho Fredericks</i> Optimization of Class Schedules using Integer Programming <i>Ashley Hovenkamp, Pam Tkachuk, and Steven Butt</i>
5:00– 6:00 PM	Break
6:00PM-~	Barbecue dinner

Day 2	Thursday July 17th, 2008
8:30 – 10:00 AM Keynote Session S21 Room D109	Nolen Ackerman , Associate Director, IT and Software Dev., R&D, Stryker Medical Tony Lorentz , Technology Team Leader, Parker Hydraulic Systems, Parker Hannifin
10:00 – 10:30 AM	Coffee break
10:30-12:00 PM <i>Session S22</i> Room D209	Micro/Nano Manufacturing Chair: Muralidhar Ghantasala <ol style="list-style-type: none"> Design and Simulation of Hybrid Micro-Actuators Subash Gokanakonda, Kamlesh Suthar and Muralidhar Ghantasala A Manufacturing Process to Improve the Surface Roughness of a CVD Coated SiC Disk by Performing Ductile Regime Single Point Diamond Turning <i>Deepak Ravindra and John Patten</i>

	<ol style="list-style-type: none"> 3. Fabrication of Magnetic Nanoparticle Based Ferro Gels Kamlesh Suthar, Muralidhar Ghantasala and Derrick Mancini 4. Multifunctional nanoparticles for imaging and therapy of brain cancer. <i>Mahaveer S. Bhojani, G. Ramachandra Reddy, Alnawaz Rehemtulla, Brian D. Ross, and Swaroop Bhojani</i> 5. The Physical and Mechanical Properties of Ni - SiC and Ni- -Al₂O₃ Nano Metal Matrix Composite Coatings <i>Pnina Ari-Gur, Khaled A. Alogab, Seyed M. Mirmiran, Abdul Aziz Alam, and Amit Jain</i>
12:00 -1:30 PM	Lunch
1:30 – 3:00 PM <i>Session S23-a Room D210</i>	<p>Lean Manufacturing Chair: Jorge Rodriguez</p> <ol style="list-style-type: none"> 1. Hypothesis Governing the Integration of Simulation and Process Reengineering, <i>Thomas Brady</i> 2. Framework for the Planning and Control of Lean Production System Implementation <i>Uwe Dombrowski and Stefan Schmidt</i> 3. Key Domains of Leanness and Agility in Job Shops <i>Zaki Kuruppallil</i> 4. Coherent Systems Modelling in Support of Lean Manufacturing Implementation in SMEs <i>Joseph Ajaefobi, Bilal Wahid, and Richard Weston</i> 5. Use of CAE Tools to Reduce Manufacturing Defects in Interior Panels <i>Sathya Narasimhan and Jorge Rodriguez</i>
1:30 – 3:00 PM <i>Session S23-b Room D212</i>	<p>CAD/CAM/CAE Chair: Alamgir Choudhury</p> <ol style="list-style-type: none"> 1. Application of Genetic Algorithm in Supplier Consolidation using Multifaceted Selection Model <i>Eduardo Perez , Shabbir Choudhuri, and Charles Standridge</i> 2. Systematic Validation of Process Automation and Cellular Layout in an Existing Furniture Production Line <i>Geoffrey J. Miller , Md. Ashfaque, Ur Rahman , and Shabbir Choudhuri</i> 3. Design Enhancement of a Hand-Powered Cycle <i>Andrew C. Hyder</i> 4. Mathematical Modeling For Simulation of Robot Motion In Manufacturing Industry <i>Alamgir Choudhury, Pavel Ikononov, Jorge Rodriguez, Mitchel Keil, Sam Ramrattan and Luis Rodriguez</i> 5. Modeling and Optimization of End Milling Operations using Quantum Seeded Hybrid Evolutionary Computational Technique <i>K. Hans Raj, Rajat Setia, Rahul Swarup Sharma, and Prabhat Hajela</i>
3:00 – 3:30 PM	Coffee Break
3:30 PM - 5:00 Panel Discussion <i>Session S24 Room D209</i>	<p>“The Future of Agile Manufacturing” Moderator: Bill Higgins</p> <ol style="list-style-type: none"> 1. <i>Mark Rivera, K&M Machine-Fabricating Inc.</i> 2. <i>Bernard J. (Buzz) Brosnan - Industrial Consultant</i> 3. <i>Tony Lorentz, Parker Hannifin Corp.</i> 4. <i>Nolen Akerman, Sryker Medical Corp.</i> 5. <i>Paul Pollock, Executive Director CAVIDS, WMU</i>
5:00 – 6:30 PM	Break
6:30 -9.15 PM Fetzer Center, WMU	<p style="text-align: center;">Conference Cocktail and Banquet</p> <p>Keynote speaker Bill Higgins, President Steel Collar Associates: “Strategies for implementing automation to compete with world labor rates and how to properly evaluate the cost of automation” Dr. Paul Engelmann, Chair IME department, WMU</p> <p>Best paper awards, Conference recognition</p>

Day 3	Friday, July 18 th , 2008
8:30 – 10:00 AM Keynote Session S31 Room D209	Mark Rivera , K&M Machine-Fabricating Inc. Paul Pollock , Executive director, CAVIDS, WMU Strategic Weapons for a Tightening Global Economy
10:00 – 10:30AM	Coffee break
10:30 AM-12:00 Session S32-a Room D210	Supply chain management Chair: Alok Verma 1. One Piece Flow Method at a Conventional Job Shop <i>Augustine Siswanto</i> 2. Designing Agility Into the Supply Chain <i>Richard Monroe and Richard Martin</i> 3. Comprehensive Agility Measurement Tool Ameya Erande, Alok Verma 4. Purchasing and Supply Chain Agility <i>Richard Monroe and Richard Martin</i> 5. Achieving Supplier Integration for the Agile Enterprise <i>Richard Monroe and Richard Martin</i>
10:30 AM-12:00 Session S32-b Room D212	Analytical Methods Chair: Pnina Ari-Gur 1. A new hybrid iron-chromium-nickel material optimized for future global demands of valve applications in IC engines. Simon Narasimhan 2. Displacement Gage for Crack Propagation Studies <i>Stoyan Stoychev</i> 3. Crystallographic Analysis of PS 304 Tribological Coatings <i>Pnina Ari-Gur, Joseph Sariel, Thomas Gnäupel-Herold, Malcolm K. Stanford, Christopher DellaCorte, and Phillip B. Abel</i> 4. Numerical modeling of performances of oil-film wedge in a hydrodynamic bearing, depending of type of roughness of contacting surfaces <i>Dimitar S. Georgiev</i> 5. Achieving Software Quality Certifications Through Agile Software Development <i>Celio Santana, Cristine Gusmao, Ana Rouiller, Alexandre Vasconcelos</i> 6. Evaluation Of The Oxidative Properties Of Vegetable Oils as a Base Stocks For Industrial Lubricants Using Spectroscopic and Thermogravimetric Analyses <i>N. H. Jayadas, and Manoj George</i>
12:00 – 1:00 PM	Lunch
1:00 – 3:30 PM	Industry Visit Stryker Corporation (registration required)
3:30 – 9.30 PM	Golf (registration required)
3:30 – 9.30 PM	Wine tasting and Lake Michigan – South Haven trip (registration required)