



Announcement

Call for Papers ASME International Manufacturing Science & Engineering Conference October 8–11, 2006 Ypsilanti, MI

The Manufacturing Engineering Division (MED) of the ASME will be organizing its own conference (separate from the IMECE) in 2006. This conference, named the **2006 ASME International Manufacturing Science & Engineering Conference (MSEC)**, will be hosted by the University of Michigan at the Ypsilanti Marriott at Eagle Crest in Ypsilanti, MI from October 8–11, 2006. A complete list of MED-sponsored symposia, including technical focus, submission deadlines, and organizer contact information can be found at the conference website (<http://wumrc.engin.umich.edu/msec/>). Brief descriptions of the symposia and organizer contact information are given below. For further information, please contact the respective co-organizers. **All abstract and paper submissions are to be made electronically directly to the symposium organizers.** For general information, please contact the Program Chair, Prof. Shreyes N. Melkote (shreyes.melkote@me.gatech.edu, Tel: 404-894-8499), or the Program Co-chair, Prof. Robert Williams (rwilliams2@unl.edu, Tel: 402-472-4755).

Energy Field Manufacturing Processes: Specific topics of interest include, but are not limited to: electromachining (EDM, ECM, ECDM), high energy processing (laser, water jet, plasma, electron beam, ion beam, X-ray, etc.), hybrid manufacturing processes, innovative use of energy fields in manufacturing processes, process optimization featuring energy fields manipulation and integration. *Dr. W. Zhang, GE Global Research, Tel: 518-387-5833, Email: zhangw@crd.ge.com, Prof. S. Lei, Kansas State University, Tel: 785-532-3731, Email: lei@ksu.edu*

Advanced Forming Process Technologies: Specific topics of interest include, but are not limited to: hydroforming (cold and warm), impulse-assisted forming processes (electro-magnetic, electro-hydraulic, etc.), warm forming of lightweight materials, laser-assisted forming, quick-plastic forming, thermoforming of composites, incremental forming, microforming, hybrid processes, fuel cell mfg., medical device mfg., equipment, tooling and system issues in forming, monitoring, controls and metrology, numerical modeling of forming processes, material and tribological characterization in forming. *Dr. M. Koç, University of Michigan, Ann Arbor, Tel: 734-763-7119, Email: mkoc@umich.edu, Dr. M. Wenner, GM R&D, Tel: 586-986-1108, Email: Michael.l.wenner@gm.com*

Multiscale Mechanical Behavior and Simulation of Machining Processes: Specific topics of interest include, but are not limited to: materials testing methods at different scales, analytical characterization of multiscale mechanical behavior, constitutive models incorporating loading histories (including strain rate and temperature coupling) and micro- and nanostructures, multiscale numerical simulations and experimental verifications with the effects of loading histories and/or micro- and nanostructures. *Prof. Y. B. Guo, The University of Alabama, Tel: 205-348-2615, Email: yguo@eng.ua.edu, Dr. D. W. Yen, Delphi Corporation, Tel: 937-455-9259, Email: david.w.yen@delphi.com*

Materials Processing for Medical Devices: Specific topics of interest include, but are not limited to processing and development of: metallic biomaterials, polymeric biomaterials, ceramic biomaterials, nano biomaterials, coatings and thin films, tribology and surface treatment. *Prof. A. Rabiei, North Carolina State University, Tel: 919-513-2674, Email: arabiei@eos.ncsu.edu, Dr. D. E. Lawrynowicz, Stryker Orthopaedics, Tel: 201-831-5349, Email: daniel.lawrynowicz@stryker.com*

Micro-Manufacturing Processes and Equipment: The symposium will cover a broad range of micro-manufacturing techniques, including subtractive (mechanical (micromilling, microdrilling, etc.), laser, micro-electrodischarge, micro-electrochemical, ultrasonic, electron-beam and ion-beam), additive (micro-scale laser sintering, micro-stereolithography, etc.), and deformation and other (micro-molding, micro-punching, etc.) manufacturing techniques. *Prof. O. B. Ozdoganlar, Carnegie Mellon University, Tel: 412-268-9890, Email: burakoz@andrew.cmu.edu, Dr. D. G. Risko, Ex-One Corp, Tel: 724-864-8426, Email: don.risko@exone.com*

Advances in Process and System Planning: Specific topics of interest include, but are not limited to: feature based modeling, computational intelligence techniques, knowledge based systems, predictive models, concurrent product and process design, tolerance considerations, cell design, layout planning, system level optimization, integrated systems, cost analysis, industrial case studies. *Prof. D. Sormaz, Ohio University, Tel: 740-593-1545, Email: sormaz@ohio.edu, P. Khurana, Delphi Research Labs, Tel: 586-323-1717, Email: pravin.khurana@delphi.com*

Manufacturing Systems: Design, Modeling, and Analysis for Quality and Productivity: Specific topics of interest include, but are

not limited to: modular manufacturing systems and fixtures, reconfigurability and reusability analysis, design for assembly and disassembly, non-rigid assemblies, large mechanical assemblies, statistical methods driven by engineering models for root cause analysis of process failures, dimensional management and variability control. *Dr. W. Huang, University of Massachusetts–Dartmouth, Tel: 508-910-6568, Email: whuang@umassd.edu, Dr. Z. Kong, Dimensional Control Systems, Inc., Tel: 248-269-9777, Email: jkong@3dcs.com*

Advanced Condition Monitoring and Maintenance Technologies: Specific topics of interest include, but are not limited to: signal processing algorithms, equipment condition and process monitoring, diagnosis and prognosis methodology, CBM system design and optimization, maintenance action scheduling based on CBM and reliability life models, industrial case studies. *Prof. C. J. Li, RPI, Troy, Tel: 518-276-6192, Email: lic3@rpi.edu, Dr. S. H. Choi, GE Gas Turbines (Greenville), LLC, Tel: 864-254-4598, Email: sukhwan.choi@ps.ge.com*

Advances in Metrology: Specific topics of interest include, but are not limited to: recent trends in engineering and coordinate metrology; meso and nano scale metrology, development of advanced smart sensors including application of wireless, micro-electromechanical system (MEMS), power-scavenging technologies and metrology challenges in meso-scale machine tool manufacturing; predictive process metrology, development of measurement methods to provide in-situ, real-time, or process intermittent information, such as machine dynamics, thermal measurements during material removal, dynamic high temperature/high strain rate material response; surface metrology trends including nanotechnology, semiconductor applications. *Prof. T. R. Kurfess, Clemson University, Tel: 864-656-6339, Email: kurfess@clemson.edu, Dr. A. A. Claudet, Sandia National Laboratory, Tel: 505-845-1381, Email: andre.claudet@sandia.gov*

Quality and Reliability of Machining Systems: Major areas of interest include: (1) Metrology and Measurement Systems for Assessment of Product Quality and Process Reliability. Specific topics of interest include, but are not limited to: measuring the performance and accuracy of machine tools, the influence of workholding and tooling systems on product quality and process reliability; (2) Process Monitoring and Statistical Process Control (SPC) Methods for the Measurement and Control of Product Quality and Process Reliability. Specific topics of interest include, but are not limited to the monitoring and control of: cutting forces, tool wear, dimensional and form accuracy, and vibration and chatter. *Prof. J. T. Roth, Penn State Erie, The Behrend College, Tel: 814-898-7587, Email: jtr11@psu.edu, Dr. R. Ivester, NIST, Tel: 301-975-8324/387-6530, Email: ivester@nist.gov*

New Developments in Sensor Integration: Specific topics of interest include, but are not limited to: integration of sensors in manufacturing systems, machine failure detection, surface scanning applications, sheet metal inspection systems, remote sensing, sensor layout, sensor networks, micro-sensors applications, sensors performance evaluation, algorithms and protocols for sensor data communication and data storage. *Prof. J. Camelio, Michigan Technological University, Tel: 906-487-3363, Email: jcamelio@mtu.edu, Dr. R. Gerth, Center for Automotive Research, Tel: 734-662-1287, Email: rgerth@cargroup.org*

Application and Implementation Ready Technologies: This symposium is actively seeking research oriented papers that can demonstrate that they are at a point where they can be directly applied or utilized by industry. The papers can focus on new products or innovations (such as new sensors, new equipment, new usage for existing equipment, etc.) or on new processes (new processing methods, new implementation-ready algorithms, etc.). However, the research must be at the stage where the product or process is ready to be employed in industry or is ready to be developed for market. Papers will be accepted across all fields of manufacturing. *Prof. J. T. Roth, Penn State Erie, The Behrend College, Tel: 814-898-7587, Email: jtr11@psu.edu, Dr. G. Xiao, GM R&D, Tel: 586-986-1483, Email: guoxian.xiao@gm.com*

Nano and Micro Mechanical and Related Hybrid Tools for Nanomanufacturing: This symposium invites papers in the following areas, though not limited to: scanning probes (AFM/STM/AFF, etc.), MEMS and related micro and meso tools–actuators, manipulators, end effectors, nanomachining, nanodeposition, micro and nanocontact printing, integration of metrology tools in fabrication platform, templated assembly, patterning and manipulation, applications of these processes, scale-up and prototyping, education and societal impact. *Prof. M. Culpepper, MIT, Tel: 617-452-2395, Email: culpepper@mit.edu, Prof. C. R. Taylor, VCU, Tel: 804-827-7025, Email: crtaylor@vcu.edu, Dr. A. Malshe, NanoMech LLC, Tel: 479-571-2592, Email: Ajay.Malshe@nanomech.biz*

Submission Deadlines (for all symposia)

Abstract (250–300 words): December 16, 2005 (*abstract submission strongly recommended but not mandatory*)

Full Paper (for review): January 31, 2006

Paper Acceptance Notification: March 31, 2006

Final Paper Submission: May 15, 2006

Note: All submissions except the final paper are to be made via email (PDF file format) to the appropriate symposium organizer. See <http://wumrc.engin.umich.edu/msec/> for details.