

## ***Call For Papers***

### ***First International Conference on Micromanufacturing***

September 13-15, 2006  
**Levis Faculty Center, University of Illinois  
at Urbana-Champaign**  
Urbana, Illinois

Emerging miniaturization technologies are perceived as potentially key technologies of the future that will bring about completely different ways people and machines interact with the physical world. Manufacturing at the micro-scale (a few microns to a few millimeters) is taking on increased importance as needs in bridging the nano- and the macro-worlds become more acute. Applications of miniaturization technologies can now be found in many areas including optics, electronics, medicine, biotechnology, communications, and avionics to name a few. These applications involve a wide range of engineering materials, three-dimensional features, and high relative accuracies ( $10^{-3}$ – $10^{-5}$ ). As a result, new processes and manufacturing equipment are being developed to meet needs not achievable by more conventional lithography-based, surface micro-machining techniques. This two-and-one-half-day conference will focus on new developments in micromanufacturing processes and equipment. Papers are sought to address theoretical and applied research issues related to processes, systems, and equipment for manufacture, assembly, and metrology, associated with the creation of components and systems with 3D features to high relative accuracies in a wide range of engineering materials. Topics may include but are not limited to mechanics and dynamics of process behavior at the microscale; the miniaturization of machines and equipment as well as associated issues such as tooling, fixturing, positioning, motion generation, sensors systems, and control; the microfactory paradigm; new concepts and methods for micro-scale metrology; materials handling, joining, and assembly at the micro-scale; multi-scale modeling and simulation; design for micro-scale manufacturing; and materials-related issues at the micro-scale. A broad range of processes will be considered including machining, forming, EDM and ECM, laser-based processing, and others. Papers are also sought that describe interesting applications of both current and emerging micromanufacturing methods and equipment, including those that bridge the nano- and macro- worlds.

### ***Submission of Long Abstracts***

Those wishing to contribute papers to the conference should submit a long abstract (1000 words) that describes the paper content, including some specific results, with figures, tables, etc. Copyrights to long abstracts and papers will remain with the authors.

**The deadline for submission of abstracts is January 15, 2006. Reviews will be completed and authors notified of paper acceptance by March 15, 2006. Final paper manuscripts must be submitted by July 15, 2006. Specific instructions for the preparation of manuscripts can be found at the conference website ([www.](http://www.)). All submissions should be made electronically at this website.**

For planning purposes, it would be helpful if authors would submit a Letter of Intent to submit an abstract at their earliest convenience at the Website.

### **Conference Format**

The conference will include a plenary session in the morning of the first two days that features invited papers. The remainder of the AM and the PM sessions will be comprised of papers organized into concurrent tracks, based on content. Conference attendees will have lunch together each day. There will be a banquet on the evening of Day 1 and a wine and cheese reception on the evening of Day 2.

### **Conference Organizing Committee**

Martin Culpepper (Co-Chair), MIT  
Kori Ehmann (Co-Chair), Northwestern Univ.  
Dick DeVor, UIUC  
Shiv Kapoor, UIUC  
John Ziegert, Univ. of Florida  
Jian Cao, Northwestern University  
Tom Kurfess, Clemson University  
Dave Hardt, MIT  
K. Rajurkar, Univ. of Nebraska  
Marc Madou, Univ. of California-Irvine  
Ajay Malshe, Univ. of Arkansas, Fayetteville  
R. Ryan Vallance, George Washington Univ.  
Shreyes Melkote, Geo. Institute of Technology  
Jun Ni, Univ. of Michigan  
Brad Nelson, ETH Zurich, CH  
D. W. Cho, POSTECH, S. Korea  
Y. S. Liao, National Taiwan Univ.  
Marc Bonis, Univ. of Technology Compiegne, France  
Kuniaki Dohda, Gifu Univ., Japan  
Mei Zhao, Shanghai Jiao Tong Univ., PR China  
Wenhao Huang, Univ of Science and Tech. of China  
S. S. Joshi, IIT Bombay, Mumbai, India  
S. Mohan, Indian Institute of Science, Bangalore  
Dr. Iwona Turlik, Motorola  
Tom McDunn, EigerLab, Rockford, IL  
Dave Burton, Performance Microtool, Inc.  
Ken Masaki, Matsushita Electric Industrial Co, Ltd.

