

Poster Session: Laser Micromachining and Micro-EDM

The Innovative Laser Technology Applications for High Density Microstructures Fabrication

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Experimental Friction Study of Micro-Scale Laser-Textured Surfaces

T. Davis, R. Zhou, K. Pallav, M. Beltran, J. Cao, K. Ehmann, Q. Wang. *Northwestern University, U.S.A.*; C. Xia. *Ford Motor Company, U.S.A.*; R. Talwar, R. Lederich. *The Boeing Company, U.S.A.*

A Study for Laser/ECM Complex Machining System and Technology for Small Diameter Tube and Rod

T. Kurita, N. Kasashima, N. Mishima. *National Institute of Advanced Industrial Science and Technology (AIST), Japan*.

Microstereolithography: A Review

C. Xia, A. Cox, N. Fang. *University of Illinois at Urbana-Champaign, U.S.A.*

Understanding Gap Phenomena in the μ -EDM Process Using Underwater Acoustics

A. Garg, J. Ramkumar. *Indian Institute of Technology, India*; Nagahanumaiah. *Central Mechanical Engineering Research Institute, India*; S. Kapoor, R. DeVor. *University of Illinois at Urbana Champaign, U.S.A.*

Meso-Scale High-Strength Metal Clock Plate

R. Wild, M. Serna, S. Prasad, D. Gill. *Sandia National Laboratories, U.S.A.*

Poster Session: Microforming

Microfactories for Micro Bulk Metal Forming

H. Hansen. *Technical University of Denmark, Denmark*; M. Arentoft, N. Paldan. *IPU Manufacturing, Denmark*.

Development of Divided Progressive Micro Press

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Design of Modified Cymbal-type Displacement Amplification Device for Micro Punching System

J. Choi, B. Kim. *Kangwon National University, Korea*; Y. Choi. *Changwon National University*; H. Lee, N. Lee. *Korea Institute of Industrial Technology, Korea*.

Deformation Behavior and Critical Parameters in Microscale Laser Dynamic Forming

H. Gao, G. Cheng. *Purdue University, U.S.A.*

Tribology in Micro/Meso-Scale Forming

K. Dohda, T. Makino. *Nagoya Institute of Technology, Japan*.

Fabrication of Nanopillar Arrays on PMMA by Hot Embossing for Broadband Antireflection

H. Shin, J. Kwon, Y. Seo, B. Kim. *Kangwon National University, Korea*.

Poster Session: Microsystems, Actuators and Sensors

On-demand Factory as an Answer for Micro Mechanical Fabrication

N. Mishima, S. Kondoh, S. Nakano, K. Ahida, K. Masui. *National Institute of Advanced Industrial Science and Technology (AIST), Japan.*

Untethered Manufacturable Microrobots via Compliant Silicon MEMS Assembly and 3D Die Stacking

R. Murthy, D. Popa, A. Das. *University of Texas at Arlington, U.S.A.*

Design and Analysis of High Precision Linear Motor with Halbach Magnet Array for Micro Fabrication

J. Kim, M. Lee, S. Lee, M. Hong. *Ajou University, Korea*; C. Lee, J. Song. *Korea Institute of Machinery & Materials (KIMM), Korea.*

Effects of Distributed Multi-pole Model on Three-dimensional Non-contacting Orientation Sensor

H. Son, J. Song. *Korea Institute of Machinery & Materials (KIMM), Korea*; K. Lee. *Georgia Institute of Technology, U.S.A.*

Measuring Mechanical Properties of Nano Structures under Realtime Observation

K. Tsuchiya, K. Takayama, S. Kimura, Y. Kojima, K. Nagato, H. Morii, M. Nakao. *The University of Tokyo, Japan.*

Potentiality of Dielectric Elastomers in the Microfactory

C. Pagano, E. Zanotti, I. Fassi. *National Research Council, Italy.*

Poster Session: Micromachining

A Desktop Vertical Milling Machine and Its Application to a Microfactory

S. Ro, S. Jang, J. Park. *Korea Institute of Machinery & Materials (KIMM), Korea.*

Adaptive Compensation of Tool Deflection in Micro-milling Processes

Y. Tang, C. Xu. *University of Central Florida, U.S.A.*; M. Jackson. *Purdue University, U.S.A.*

Towards Micro (Hard) Milling using Miniature Active Magnetic Bearings

H. Langen, M. Kimman, R. Blom, P. Li, E. Buice, R. Schmidt. *Delft University of Technology, The Netherlands.*

Finite Element Modeling and Vibration Control of a Tetraform Space Frame for use in Micro-Scale Machining

K. Knipe, C. Xu. *University of Central Florida, U.S.A.*; M. Jackson. *Purdue University, U.S.A.*

Improvement in Micro-grinding on Alumina and Zirconia Ceramics for Dental Applications

H. Kasuga, T. Mishima. *Saitama University, Japan*; Y. Watanabe, H. Ohmori. *RIKEN, Japan.*

High-speed Fluid-bearings for Meso-scale Machine Tool (mMT) Spindle Applications

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