

August 24. Friday, 2007

Time	Title Speaker(Affiliations)
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Session III Chair : Dr. Byung-Kwon Min

09:00~09:20	Extended Use of Atomic Force Microscopy for Micro/Meso Scale Part Measurement Dr. Seong-Wook Hong (Kumoh National Institute of Technology, KOREA)
09:20~09:40	White-Light Scanning Interferometry to Inspect μ-Scale Part in μ-Factory Dr. Gee-hong Kim (Korea Institute of Machinery and Materials, KOREA)
09:40~10:00	Micro chamber development capable of controlling temperature, humidity and cleanness and reducing vibration Dr. Dong-hwan, Kim (Seoul National University of Technology, KOREA)
10:00~10:20	Analytical Approaches to Understand Structural Characteristics of Miniaturized Mechanical Structures Dr. Soo-Hun Lee (Ajou University, KOREA)
10:20~10:40	Coffee Break
10:40~11:00	A Study on the Micro Pump Metallic Thin Foil Valve Manufacturing Process using the Miniaturized Micro Press System Dr. Nak-Kyu Lee(Korea Institute of Industrial Technology, KOREA)
11:00~11:20	Development of High Speed Micro Punching System Dr. Byeong-Hee Kim(Kangwon National University, KOREA)
11:20~11:40	Development of Unloading Manipulator for Micro Press Dr. Chang-Soo Han(Hanyang University, KOREA)
11:40~12:00	Miniaturized Sheet Metal Forming Die Set for Ultra-fine valve part Dr. Jae Hoon, Kang(Korea Institute of Machinery and Materials, KOREA)



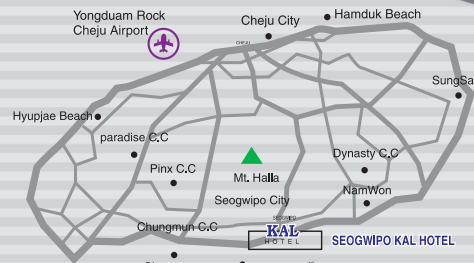
등록안내

장 소 | 서귀포 KAL호텔
일 시 | 2007. 8.23~24
참가비 | 무료(논문 및 발표집 제공, 숙박제외)



오시는 길

제주공항 리무진 셔틀버스 이용(15분배차, 60분 소요)
제주공항 택시이용(3만원, 30분 소요)



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IWMT 2007

3rd International Workshop on Microfactory Technology

August 23-24, 2007
Seogwipo KAL Hotel, Jeju-do, Korea



Korea Institute of Machinery & Materials (KIMM)
The Korean Society of Machine Tool Engineers (KSMTE)

Sponsored by
Korean Ministry of Commerce, Industry and Energy (MOCIE)

Invitations

The micro- and nano-scale manufacturing systems are regarded as key technologies for the future IT/NT systems to produce micro-mechanical, micro optics and digital systems which will change the human life-style of the future. The 'Microfactory System' is considered to have a much smaller size than the conventional manufacturing systems, so that it consumes less energy and space. This concept has been widely under development around the world.

From this motivation, our "Development of Microfactory Systems for the Next Generation" project started with sponsorship from the Ministry of Commerce, Industries and Energy, Korea in September, 2004. It is a 7 year research and development program in which many organizations in Korea, USA and Japan are participating. Now, we are heading for the end of the second year and we hold "The 3rd International Workshop on Microfactory Technology" on Thursday, August 23 and Friday, August 24, 2007 in Jeju-do, Korea. We hope this meeting will be a good opportunity to review our works and exchange the professional experiences and future directions.

August 16, 2007



Dr. Jong-Kweon Park

Principal Research Director of "Development of Microfactory Systems for the Next Generation" project

Workshop Program

August 23. Thursday, 2007

13:30~14:00	Arrival & Registration (Room)
14:00~14:10	Welcome Address (Room)
14:10~20:00	Session I (Room)

Time	Title Speaker(Affiliations)
Session I	
Session I -1 Chair : Dr. Jong-Kweon Park	
14:10~14:40	Development of Next Generation Microfactory Systems Dr. Jong-Kweon Park(Korea Institute of Machinery and Materials, KOREA) Dr. Nak-kyu Lee(Korea Institute of Industrial Technology, KOREA) Dr. SangJo Lee(Yonsei University, KOREA) Dr. Deug-Woo Lee(Pusan National University, KOREA) Dr. Jun-Yeob Song(Korea Institute of Machinery and Materials, KOREA)
14:40~15:10	Development of a Micro-Spindle for Micro/Meso-Scale Machine Tool (mMT) Applications Dr. Kornel F. Ehmann, Hyung Suk Yoon and Han kyu Sung (Northwestern University,U.S.A.)
15:10~15:40	Development of a Magnetically Levitated Multi-DOF Tilttable Stage for Micro Machining Dr. Kok-Meng Lee, Hungsun Son, Kun Bai (Georgia Institute of Technology, U.S.A.)
15:40~16:10	Development of a Micro EDM System for a Microfactory Dr. Byung-Kwon Min, Dr. Sang Jo Lee (Yonsei University, KOREA)
16:10~16:30	Coffee Break
Session I -2 Chair : Dr. Soo-Hoon Lee	
16:30~17:00	Micro-machining and measurement combination processes on desktop systems Dr. Hitoshi Ohmori (RIKEN, JAPAN)
17:00~17:30	Development of Nano-CMM for Micro Factory Inspection System Dr. Deug Woo Lee (Pusan National University, KOREA)
17:30~18:00	Reconfigurable Manufacturing Systems and Performance Monitoring in Microfactory Dr. Jun Ni (University of Michigan, U.S.A)
18:00~18:10	Coffee Break
18:10~18:40	Micro Assembly Machine and Process Control for Micro Pump. Dr. Chang-Woo Lee, Dr. JunYeob Song, and Dr. TaeHo Ha (Korea Institute of Machinery and Materials, KOREA)
18:40~19:10	The Concept and First Applications of the TUT Microfactory Dr. Riku Heikkilä(Tampere University of Technology, FINLAND)
19:10~19:40	Discussion
19:40~21:10	Banquet (Room)

August 24. Friday, 2007

Time	Title Speaker(Affiliations)
Session II Chair : Dr. Tae Jo Ko	
09:00~09:20	High precision milling machine using dual-stage of linear motor and piezo actuator In Joo Yeo , Dr. Byung Mook Chung, Dr. Tae Jo Ko , and Chun Lee (Yeungnam University, KOREA)
09:20~09:40	Feedrate Scheduling for Micro-End-Milling Based on the Cutting Force Prediction Dr. Dong-Woo Cho (Pohang University of Science and Technology, KOREA)
09:40~10:00	Structural Design Optimization of a Micro Milling Machine for Minimum Weight and Compliance using Genetic Algorithm Sung Hyun Jang, Sung Min Kim, Shil Geun Kim, Dr. Young Hyu Choi (Changwon National University, KOREA) and Dr. Jong Kwon Park (Korea Institute of Machinery and Materials, KOREA)
10:00~10:20	Miniaturized high speed air spindle with SMA tool chucking system for micro-factory application Dr. Jeong Woo Park (Pusan National University, KOREA)
10:20~10:40	Coffee Break
10:40~11:00	An Experimental Investigation of the SMA-based Tool Clamping device for Micro Spindles Dr. Woo Cheol Shin, Dr. Seung-Kook Ro and Dr. Jong-Kweon Park (KIMM KOREA)
11:00~11:20	Assembly Analysis of Digital Micro Machine Dr. Sang-ho Park (Chungnam National University, KOREA)
11:20~11:40	Design of Column System for Microfactory with Composite Materials Ju Ho Kim and Dr. Seung Hwan Chang (Chung-Ang University, KOREA)
11:40~12:00	Micro-Electrochemical Machining Using Ultra Short Pulses Chan Hee Jo, Hong Shik Shin, Bo Hyun Kim, and Dr. Chong Nam Chu (Seoul National University, KOREA)

