We cordially invite you to attend “The 8th International Workshop on Microfactories” (IWMF 2012), which will be held on June 18th–20th 2012, at Tampere Hall, number one Congress Centre in Finland. The previous successful International Workshops on Microfactories have taken place in Tsukuba, Japan in 1998, in Fribourg, Switzerland in 2000, in Minneapolis, Minnesota in 2002, in Shanghai, China in 2004, in Besancon, France in 2006, in Evanston, USA in 2008, and in Daejeon, Korea in 2010.
Workshop Scope and Topics

Miniaturization of products has been a strong global trend for several years already. Along with that, miniaturization of production equipment, facilities and the ecological footprint of production has also clearly strengthened. This development is supported by the commitment of governments and large-scale companies to move towards more environmental friendly production.

Micro and desktop factories are small-size production systems suitable for fabrication and manufacturing of micro and small sized parts and products. Micro and desktop factories decrease the need of factory floor space, and reduce energy consumption and improve material and resource utilization thus strongly supporting the new sustainable manufacturing paradigm. Micro and desktop factories can be seen also as a proper solution to point-of-need manufacturing of customized and personalized products near the point of need.

The Workshop aims at providing a forum for researchers and practitioners working on the diverse issues of micro and desktop factories, their building blocks, as well as technologies and processes applicable for micro and desktop factories. Authors are invited to submit papers for all aspects of theories, methodologies, applications, and case studies relating to micro and desktop factories.

Tentative Program

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Industry Forum on Innovation and Entrepreneurship in Micro and Desktop Factories

Wednesday, 20 June, 2012
Tampere, Finland

In conjunction with the 8th International Workshop on Microfactories (IWMF 2012)

Topics of interest include but are not limited to:
- Micro and Desktop Factory Concepts and Systems
- Micro and Desktop Factory Components, Modules, Devices and Cells
- System Aspects of Microfactories
- Architectures for Micro and Desktop Factories
- Standardization
- Plug-and-Produce Devices and System Solutions
- Advances in Controllers, Actuators and Sensors Applicable for Micro and Desktop Factories
- Ultra High Precision Fabrication
- Micro-manufacturing and -fabrication Technologies and Processes
- Non-traditional and Alternate Processes
- Integration and Logistics
- High Precision Production of 3D Micro-parts
- Microfactories for Mechatronic, Medical and Biotechnological Applications
- Fabrication under Special Conditions
- Micro-assembly and Micro-handling
- Micro and Desktop Compatible Robotics
- Point-of-need and On-site Manufacturing
- Mobile Factory
- Desktop 3D Printing
- Personal Factory and Fab @ Home
- Design and Engineering for Micro and Desktop Factories
- Technological, Economical, Environmental and/or Human Aspects
- Innovations, Visions for the Future

This Industry Forum consists of:
- Plenary presentations of selected IWMF Innovation Awards applicants
- Roundtable discussion
- IWMF Innovation Awards
- Expo

Plenary presentations will cover the details of the motivation behind the innovations, the way the original idea is formulated, the approach and process taken in order to move an initial idea to commercial products or to business opportunities, as well as lessons learned from the experience.

The roundtable discussion provides researchers and industrialists with an opportunity to learn the full development cycle from identified market needs or basic research ideas through R&D to industrial implementation and the business.

The IWMF Innovation Awards honor those achievements of person(s) with clear objectives of promoting innovation and implementation of micro and desktop manufacturing and factories.

The Expo demonstrates innovations in micro and desktop factories.

Instructions for the nominations/applications for the IWMF Innovation Awards are given on the IWMF 2012 website.
Venue

Tampere is the third largest city in Finland and the largest inland centre in the Nordic countries. It is a centre of leading-edge technology, research, education, culture, sports and business. In 2010, the City of Tampere came first in an image survey comparing the largest cities in Finland, and it was the most attractive city among Finns who plan on moving.

Tampere is a lively and energetic congress city of an international level. Its strengths include its active academic and corporate communities, Tampere Hall - which has thrice won the title of the best congress centre in Finland -, high-standard hotels, good air connections, as well as numerous venues for conferences and social programme. All services in Tampere are within a walking distance and the abundant cultural events also serve the congress guests.

Accommodation and Travel

Tampere has a wide variety of accommodation available, and the hotel rates are very reasonable compared to other major conference cities in Europe. The city’s 2,300 hotel rooms accommodate about 5,000 people. Most of the hotels are located in the city centre, within walking distance of Tampere Hall.

To reserve your accommodation, please contact directly the hotel and make the reservation according to your own travel plan. Further information will be given in the IWMF website. Information about accommodation in Tampere can be found also from the Tampere Convention Bureau’s site (www.tampereconventionbureau.fi/accommodation/).

Tampere is well connected and really easy to reach. There are frequent flights each day via Helsinki, and also direct flights from several European cities to the Tampere-Pirkkala International Airport. Trains and buses run from Helsinki to Tampere every hour.

Paper Submission

Prospective authors are invited to submit high-quality papers representing original results in the field of micro and desktop factories. Papers must be submitted through the symposium website and will be rigorously peer-reviewed and evaluated by at least two referees for technical content. The standard number of pages is 6 and the maximum page limit is 8 pages.

At least one of the authors must register for the symposium in order for the paper to be included in the symposium proceedings. Accepted papers will be published in the IWMF 2012 Proceedings. Outstanding selected papers will be published in international journals.

Registration fees

Regular participant: EUR 500
Students: EUR 350 (a proof of valid student certificate is needed)
Accompanying person: EUR 100 (technical sessions and proceedings are not included)

The registration fee includes the coffees and lunches during the Conference (IWMF & Industry Forum), welcome event, conference dinner, conference proceedings and other conference material, and the technical visits. All the prices include VAT.

Important Dates

Notification of Abstract Acceptance: 18 November 2011 - 9 December 2011
Full Paper Submission: 10 February 2012
Scientific and Organizing Committee

General Chair:
Prof. Reijo Tuokko, Tampere University of Technology, Finland

Co-Chairs:
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Dr. Yuichi Okazaki, AIST, Japan
Dr. Jong-Kweon Park, KIMM, Korea
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Huang, Shangliang Chongqing University, China
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Kim, Byeong-Hee Kangwon University, Korea
Kim, Chan-Bong Vatech Co., Ltd., Korea
Kim, Tae-Hyung Doosan Infracore, Ltd., Korea
Ko, Tae-Jo Youngnam University, Korea
Koh, Byeong Cheon Samsung Electro-mechanics Co. Ltd., Korea
Kurfess, Thomas Clemson University, USA
Lee, Deug-Woo Pusan National University, Korea
Lee, Sang-Jo Yonsei University, Korea
Lee, Soo-Hun Ajou University, Korea
Lee, Sukhan Sungkyunkwan University, Korea
Liao, Y. S. National Taiwan University, Taiwan
Liu, Kui SIMTech, Singapore
Lutz, Philippe LAB, UFC, France
Matsumoto, Akihiro Toyo University, Japan
Mayor, Rhett Georgia Institute of Technology, USA
Meng, Guang Shanghai Jiao Tong University, China
Michel, Bernd Fraunhofer Institute, Germany
Min, Byung-Kwon Yonsei University, Korea
Mishima, Nozomu AIST, Japan
Nakajima, Naomasa University of Air, Japan
Nakao, Masayuki University of Tokyo, Japan
Nelson, Bradley ETH-Zürich, Switzerland
Ni, Jun University of Michigan, USA
Okazaki, Yuichi AIST, Japan
Ormito, Hitoshi RIKEN, Japan
Park, Bee-Chul KOMMA, Korea
Park, Hyung-Wook UNIST, Korea
Park, Jong-Kweon KIMM, Korea
Pham, Duc-Truong Cardiff University, United Kingdom
Qunpeng, Zhong CJME, China
Ratchev, Svetan University of Nottingham, UK
Regnier, Stephane Universite Marie-Curie, France
Ro, Seung-Kook KIMM, Korea
Song, Jun-Yeob KIMM, Korea
Stephanou, Harry The University of Texas at Arlington, USA
Tseng, Mitchell Hong Kong University of Science and Technology, Hong Kong
Tsutsui, Yasukata AIST, Japan
Tuokko, Reijo Tampere University of Technology, Finland
Uhlmann, Eckart Technical University, Berlin, Germany
Wang, Shi-Ming Chung Yuan Christian University, Taiwan
Wang, Yuelin SIMTech, CAS, China
Wu, Chuen-Fuu MIRDC, Taiwan
Yang, Min-Yang KAIST, Korea
Zhou, Quan Aalto University, Finland

Contact
Organizer:
Department of Production Engineering, Tampere University of Technology
Email: iwmf2012@tut.fi
Website: www.tut.fi/iwmf2012

IWMF 2012
Department of Production Engineering
Tampere University of Technology
P.O.B. 589
Fl-33101 Tampere
Prof. Reijo Tuokko, General Chair, tel. +358 40 849 0270
Dr. Minna Lanz, Organizing Chair, tel. +358 40 849 0278

TAMPERE UNIVERSITY OF TECHNOLOGY

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