INNOVATIONS FOR INDUSTRY FORUM

Program · Special displays · List of exhibitors

Halle/*Hall* 17, Stand C60

GREEN INTELLIGENCE CHINA PARTNER COUNTRY 2012

Industrial Automation

HANNOVER MESSE

NEW TECHNOLOGY FIRST

23.–27. April 2012 · Hannover · Germany

www.hannovermesse.de/de/industrialautomation

Forum „Innovations for Industry“

Als wichtige internationale Plattform für Innovationen bietet das Forum Experten, Wissenschaftlern und Unternehmern die Möglichkeit, sich dem anhaltenden Trendthema der miniaturisierten Industrielösungen zu widmen und neueste Entwicklungen sowie Forschungsergebnisse zu präsentieren.

Die Schwerpunkte des Forums 2012 werden unter anderem auf den folgenden Themen liegen:

- Antriebstechnik
- Oberflächentechnik
- MEMS Produkte für Industrial Automation
- Energy Harvesting
- Mikromaterialbearbeitung
- Nanotechnologie
- Lasertechnologie

As an important international platform for innovations, the FORUM Innovations for Industry provides the opportunity for industry experts, scientists and entrepreneurs to come together to discuss the persistent trend issue of miniaturized industrial solutions and to present their latest product developments and research results.

The main focus of the forum Innovations for Industry will be on the following topics:

- *Drive Engineering*
- *Surface Technology*
- *MEMS products for Industrial Automation*
- *Energy Harvesting*
- *Micromachining*
- *Nano Technology*
- *Laser Technology*

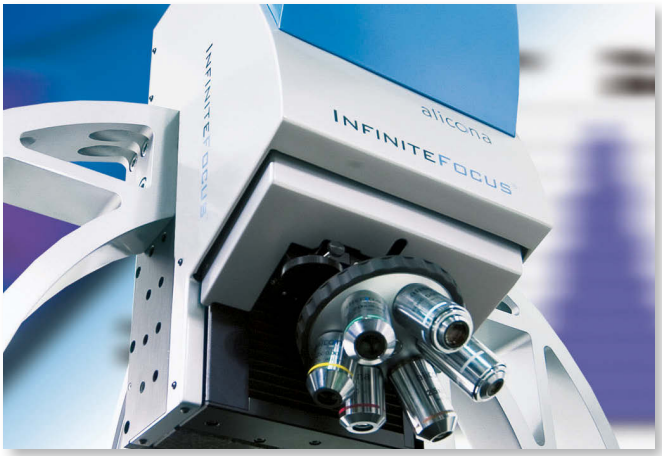
Veranstalter/ *Organizer:*	Deutsche Messe/ IVAM Microtechnology Network
weitere Partner/ *more partners:*	VDI/VDE Innovation + Technik GmbH
Sprache/ *Language:*	Englisch oder Deutsch/ *English or German*
Teilnahme/ *Participation:*	Free of charge to HANNOVER MESSE ticket holders
Kontakt/ *Contact:*	IVAM Microtechnology Network Orkide Karasu Tel. +49 231 9742-7086 ok@ivam.de

Source: IVAM

Moderation/*Host:* Heinz-Peter Hippler, IVAM Microtechnology Network, Dortmund (DE)

Language: English

11.00 – 11.15	**Opening of the Forum** Heinz-Peter Hippler, CEO of IVAM Microtechnology Network, Dortmund (DE) Marc Siemering, Deutsche Messe, Hanover (DE)
11.15 – 11.35	**Ceramic in the Field of Micro Technology** Walter Kuhn, maxon motor GmbH, Sexau (DE)
11.35 – 11.55	**Developing Innovative Automatic Positioning Applications based on Elliptec's Piezotechnology** Stefanie Krause, Christoph Wolthaus, Elliptec Resonant Actuator AG, Dortmund (DE)
11.55 – 12.15	**Optical Micro-Coordinate Measurement to Numerically Verify Surface Form and Surface Finish** Daniel Soares, Alicona Imaging GmbH, Grambach (AT)
12.15 – 12.35	**Licensing Technology** Dr. Robert Harrison, 24IP Law Group, Munich (DE)
12.35 – 12.55	**Metrology for MEMS Production** Wolfgang Melzig, FRT GmbH, Bergisch Gladbach (DE)

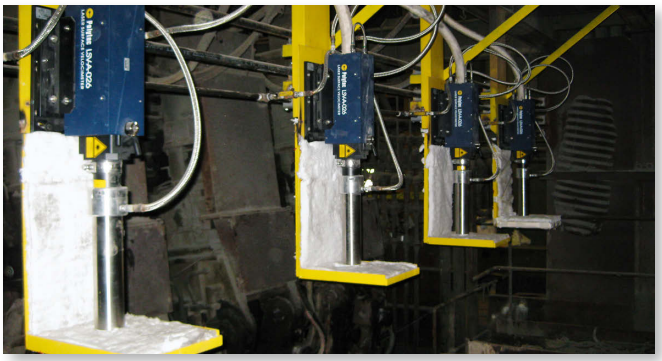


Source: Alicona Imaging GmbH

Moderation/*Host:* Mona Okroy, IVAM Microtechnology Network, Dortmund (DE)

Language: English

13.30 – 13.50	**Deep-Ultraviolet Light Emitting Diodes for Sterilization** Dr. Kenji Tsubaki, Eco Solutions Company, Panasonic Corporation, Osaka (JP)
13.50 – 14.10	**3-D Dynamic Characterization of Microsystems using Optical Measurement** Dr. Heinrich Steger, Polytec GmbH, Waldbronn (DE)
14.10 – 14.30	**Microsdispensing in Industrial Processes** Wilhelm Meyer, microdrop Technologies GmbH, Norderstedt (DE)
14.30 – 14.50	**Printed Smart Objects and their Digital Fabrication** Prof. Dr. Reinhard R. Baumann, Fraunhofer Institute for Electronic Nano Systems ENAS, Chemnitz (DE)
14.50 – 15.10	**Berlin Adlershof** Jörg Israel, Berlin Adlershof – Development and Management Company: WISTA-MANAGEMENT GMBH, Berlin (DE)
15.10 – 15.30	**New Approaches in Magnetic Absolute Position Sensing/Encoding** Peter Kogej, RLS d.o.o., Ljubljana-Dobrunje, Slovenia (SI)



App LSV TMK-Ipsco

Source: Polytec GmbH

Fraunhofer ILT & Project Partner – SESSION-I

Moderation/*Host:* Massimo Perucca, DIAD S.r.l. Buttigliera Alta (IT)

Language: English

10.00 – 10.10	**Welcome. Introduction to the Training Programme-I Event and Brief Presentation of Session-I Speakers Panel** Massimo Perucca, DIAD S.r.l., Buttigliera Alta (IT)
10.10 – 10.25	**Overview of Polytubes Project** Erik Perzon, Swerea IVF AB, Molndal (SE)
10.25 – 10.50	**Process Chain for the Manufacture of Polymeric, Tubular Micro-Components and "POLYTUBES Micro-Factory" Concept** Yi Qin, University of Strathclyde, Strathclyde (UK)
10.50 – 10.55	**Question time**
10.55 – 11.20	**The POLYTUBES Manufacturing Platform and Control** Ivan Calderon, Sysmelec S.A., Gals (CH)
11.20 – 11.25	**Question time**
11.25 – 11.40	**Break**
11.40 – 12.05	**Technologies and System Integration through an Adapted Process Transfer Strategy: the Maturity Model** Konstantin Konrad, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Stuttgart (DE)
12.05 – 12.10	**Question time**
12.10 – 12.35	**Using ANTER's Neural Networks (ANNs) and Knowledge Engineering Methods for Modeling and Design Micro Manufacturing Processes for Micro Tubular Products** Nikolaos Mekras, ANTER, Athens (GR)
12.35 – 12.40	**Question time**
12.40 – 13.00	**Open Discussion and Session-I Concluding Remarks** Massimo Perucca, DIAD S.r.l., Buttigliera Alta (IT)

Fraunhofer ILT & Project Partner – SESSION-II

Moderation/*Host:* Massimo Perucca, DIAD S.r.l. Buttigliera Alta (IT)

Language: English

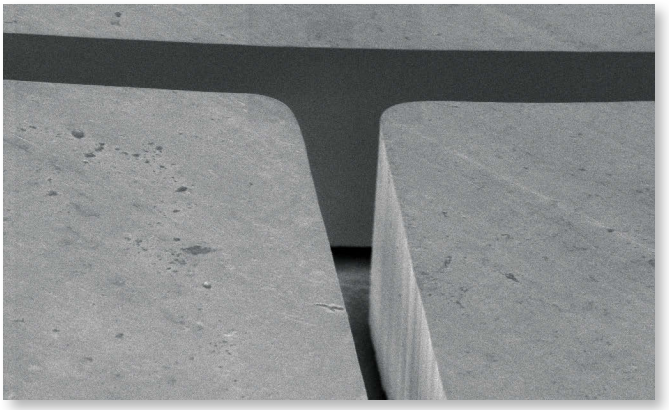
14.00 – 14.10	**Introduction to Session-II and brief Presentation of Speakers Panel** Massimo Perucca, DIAD S.r.l., Buttigliera Alta (IT)
14.10 – 14.25	**The Process of Micro-Extruding Polymer Tubes** Daniel Wendels, Swerea IVF AB, Molndal (SE)
14.25 – 14.30	**Question time**
14.30 – 14.45	**Hot Embossing of Tubular Micro-Components** Jie Zhao, University of Strathclyde, Strathclyde (UK)
14.45 – 14.50	**Question time**
14.50 – 15.05	**Cross Rolling of Tubular Micro-Components** K. S. Hansen, Institute for Produktudvikling – IPU, Lyngby (DK)
15.05 – 15.10	**Question time**
15.10 – 15.30	**System and Process for Laser Drilling and Trimming of Micro-Tubes** J. Ryll, Fraunhofer Institute for Laser Technology ILT, Munich (DE)
15.30 – 15.35	**Question time**
16.00 – 16.15	**Micro-Mechanics Modelling for Design and Manufacturing** Jianguo Lin, Imperial College London, London (UK)
16.15 – 16.20	**Question time**
16.20 – 16.40	**Blow Forming of Polymer Micro-Components** C. Hartl, University of Applied Sciences Cologne, Institute of Production, Cologne (DE) G. Anyasodor, University of Applied Sciences Cologne, Institute of Product, Cologne (DE)
16.40 – 16.45	**Question time**
16.45 – 17.15	**Open Discussion and Concluding Remarks** Massimo Perucca, DIAD S.r.l., Buttigliera Alta (IT)

Lasertechnology for Micromachining and Microproduction

Moderation/*Host:* Dr. Alexander Olowinsky, Fraunhofer Institute for Laser Technology ILT, Aachen (DE)

Language: English

11.00 – 11.20	**Laser Marking** Roberto Giannetti, ROFIN-SINAR Laser, Hamburg (DE)
11.20 – 11.40	**Laser Based Manufacturing Processes for Battery Technology** Dr. Alexander Olowinsky, Fraunhofer Institute for Laser Technology ILT, Aachen (DE)
11.40 – 12.00	**Machining Display Glass with Picosecond Lasers** Dr. Dirk Müller, Lumera Laser GmbH, Kaiserslautern (DE)
12.00 – 12.20	**Picosecond Lasers for Precise Micromachining** Hans-Peter Wunde, Time-Bandwidth, Zuerich (CH)
12.20 – 12.40	**Picosecond Laser Micromachining for Microfluidic and MEMS Application** Dr.-Ing. Jörg Nestler, Chemnitz University of Technology, Center for Microtechnologies (ZfM), Chemnitz (DE)
12.40 – 13.00	**Thin Film Sensors going 3D** Dipl.-Ing. Oliver Suttmann, Laser Zentrum Hannover e.V., Hanover (DE)



Source: Lumera Laser GmbH

Session Nanotechnology

Moderation/*Host:* Dr. Gunther Hasse, VDI Technologiezentrum, Duesseldorf (DE)

Language: English

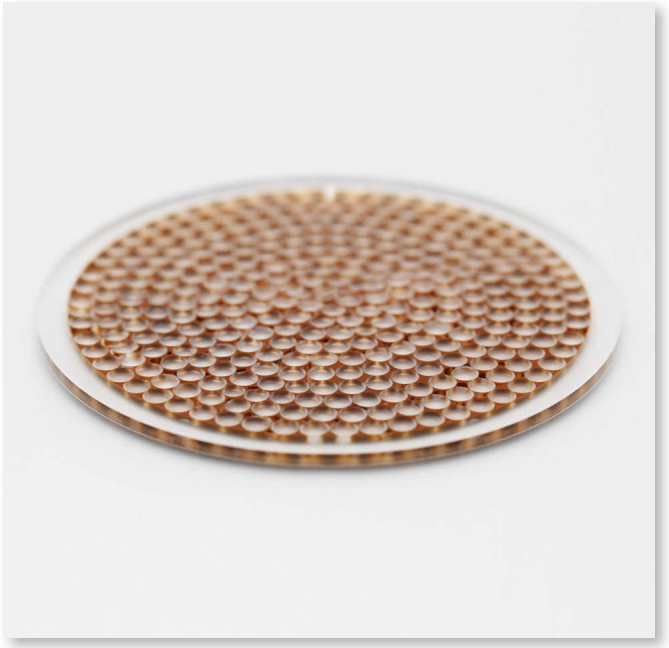
13.30 – 13.55	**Resources, Energy & Future – the ultimate Drivers for Nanostructure & Nanotech** Prof. Dr. Henning Zoz, Zoz Group, Wenden (DE)
13.55 – 14.15	**Support Actions for Commercialization of R&D Results in Micro- and Nanomanufacturing** Tanja Meyer, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Stuttgart (DE)
14.15 – 14.30	**Nanotechnology in the Leibniz Association – The new Network Leibniz Nano** Dr. Mario Quilitz, Leibniz-Netzwerk Nano, Saarbrücken (DE)
14.30 – 14.45	**INM – Leibniz Institute for New Materials – Nanotechnology from the Molecule to the Pilot Production** Dr. Mario Quilitz, Leibniz-Netzwerk Nano, Saarbrücken (DE)
14.45 – 15.05	**DaNa – Internet based Knowledbase Nanomaterials** Dr. Christoph Steinbach, DECHEMA e.V., Frankfurt am Main (DE)
15.05 – 15.25	**Protection against Forgeries with Ara-Authentic® Coatings: Unique and Sustainable – with App-based Proof for Originality** Dr. Ralph Domnick, Ara-Authentic GmbH, Erlangen (DE)
15.25 – 15.45	**Analytical Methods at Nanomaterials** Dr. Olaf Günnewig, SGS Institut Fresenius GmbH, Dortmund (DE)

Energy Harvesting & Wireless Sensor Networks Session

Moderation/*Host:* Dr. Matthias Künzel, VDI/VDE Innovation + Technik GmbH, Berlin (DE)

Language: English

10.00 – 10.20	**MEMS, the Engine of Internet of Things** Dr. Haixia Zhang, Institute of Microelectronics, Peking University, Peking (CN)
10.20 – 10.40	**MEMSENSE-Development of Innovative Sensor Systems offering Distributed Intelligence** Dr. Emmanuel Zervakis, THEON Sensors, Athens (GR)
10.40 – 11.00	**The Landscape of Japanese MEMS R&D and Industry** Dr. Jun Sakai, Micromachine Center, Tokyo (JP)
11.00 – 11.20	**Custom MEMS Devices for Cutting Edge Innovations** Dr. Peter Detemple, Institut für Mikrotechnik Mainz GmbH, Mainz (DE)



Source: Fisba Optik GmbH

Moderation/*Host:* Bernd Folkmer, HSG-IMIT, Villingen-Schwenningen (DE)

Language: English

12.00 – 12.30	**Micro Energy Harvesting – Generators, Systems and Applications** Michael Kröner, Department of Microsystems Engineering – Laboratory for Design of Microsystems University of Freiburg – IMTEK, Freiburg (DE) Prof. Dr. Peter Woias, Department of Microsystems Engineering – Laboratory for Design of Microsystems University of Freiburg – IMTEK, Freiburg (DE)
12.30 – 12.50	**Energy Harvesting Solutions for Powering Wireless Automation** Roy Freeland, Perpetuum Ltd., Southhampton (GB)
12.50 – 13.10	**Intelligent Heating Systems by Means of Energy Scavenging** Stefan R. Schwamberger, Precision Motors Deutsche Minebea GmbH, Villingen-Schwenningen (DE), (JP)
13.10 – 13.30	**Radio Sensors with Energy Harvesters for Wireless Condition Monitoring in Industrial Applications** Michael Niedermayer, Fraunhofer Institute for Reliability and Microintegration IZM, Berlin (DE) Stephan Guttowski, Fraunhofer Institute for Reliability and Microintegration IZM, Berlin (DE)
13.30 – 13.50	**Energy Harvesting for Highspeed Sensor Telemetry in Continuous Wave Transmission** Daniel Hoffmann, HSG-IMIT, Villingen-Schwenningen (DE) Heinrich Walk, CADWalk, Allmendingen (DE)
13.50 – 14.10	**Thermoharvesting goes Embedded – Modular Wireless Power Supply based on Waste Heat** Burkhard Habbe, Micropelt, Freiburg (DE)
14.10 – 14.30	**Thermal Transmitter – a Contribution to Energy Harvesting** Dr. Wolfgang Beck, Duropan GmbH, Halberstadt (DE)

Energy Harvesting & Wireless Sensor Networks Session

Moderation/*Host:* Bernd Folkmer, HSG-IMIT, Villingen-Schwenningen (DE)

Language: English

14.30–14.50	**Reliable Energyautonomous Wireless WaterMetering – SiegaWATT** Martin Krauße, wbk Institut für Produktionstechnik, Karlsruher Institut für Technologie KIT, Karlsruhe (DE)
14.50–15.10	**Wireless Pressure Switches for Condition Monitoring of Airducts and AirCon Systems** Rainer Beck, Beck GmbH Druckkontrolltechnik, Steinenbronn (DE) Andreas Kummer, Beck GmbH Druckkontrolltechnik, Steinenbronn (DE)
15.10–15.30	**Microelectronic Circuits for Energy Harvesting** Christian Moranz, Department of Microsystems Engineering – Fritz Huettinger Chair of Microelectronicy, University of Freiburg – IMTEK, Freiburg (DE) Prof. Yiannos Manoli, Department of Microsystems Engineering – Fritz Huettinger Chair of Microelectronicy, University of Freiburg – IMTEK, Freiburg (DE)
15.30–15.50	**Power Management in Energy Harvesting Applications** Peter Spies, Fraunhofer Institute for Integrated Circuits IIS, Erlangen (DE)
15.50–16.10	**Semiconductor Developments bringing Energy Harvesting to the Mass Market** Matthieu Chevrier, Texas Instruments Deutschland GmbH, Freising (DE)
16.10–16.30	**Novel Broadband Vibration Energy Harvesters and Performance Studies on Wireless Sensor Networks** Jürgen Schwager, Mechatronics University Reutlingen, Reutlingen (DE) Prof. Dennis Hohlfeld, Mechatronics University Reutlingen, Reutlingen (DE)

VDI/VDE Veranstaltung, Technologische Grundlagen und Anwendungen der Mensch-Technik-Interaktion

Moderation/*Host:* Dr. Kristian Döbrich, VDI/VDE Innovation + Technik GmbH, Berlin (DE)

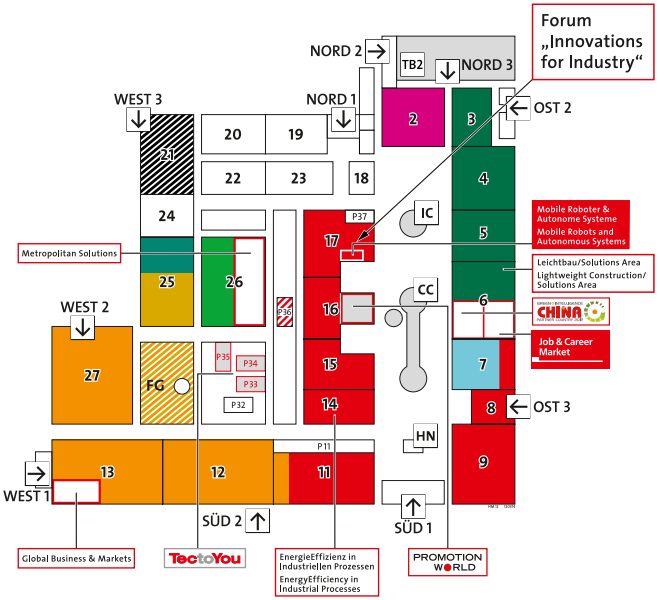
Sprache/*Language*: Deutsch/*German*

Anhand von Vorträgen und Diskussionen zu Technologien und Anwendungen werden Beispiele für vom Bundesministerium für Bildung und Forschung geförderte Forschungsprojekte zum Zukunftsfeld Mensch-Technik-Interaktion vorgestellt. Das Forum setzt bei den gesellschaftlichen Bedarfen nach technischer Assistenz bei Sport, Gesundheit und Reha, medizinischen Anwendungen sowie Betreuung im häuslichen Umfeld an und spannt den Bogen zur technologischen Umsetzung.

10.30–10.40	**Begrüßung** Dr. Kristian Döbrich, VDI/VDE Innovation + Technik GmbH, Berlin (DE)
10.40–11.20	**Mensch-Maschine-Schnittstellen in der Prothetik** Dr. Bernhard Graimann, Otto Bock HealthCare GmbH, Duderstadt (DE)
11.20–12.00	**Kooperative Sensornetze – Überwachung von Zäunen und Assistenz bei Sport und Reha** Norman Dziengel, Institut für Informatik, Freie Universität Berlin, Berlin (DE)
12.00–12.45	**ALIAS – Soziale Roboter unterstützen den Menschen in den eigenen vier Wänden** Dr. Andreas Bley, MetraLabs GmbH, Ilmenau (DE)

Source: PTF Pfüller GmbH & Co.KG

- Eingang / Entrance
- IC Informations-Centrum / Information Center
- CC Convention Center
- HN Haus der Nationen / House of Nations
- FG Freigelände / Open-air site
- Robotation Academy (P 36)
- PROMOTION WORLD (Halle/Hall 16)
- Fastener Fair (Halle/Hall 21)



- **Industrial Automation** Hallen/Halls 7–9, 11, 14–17
- **Industrial Supply** Hallen/Halls 3–6
- **Energy** Hallen/Halls 11–13, 27, FG
- **CoilTechnica** Halle/Hall 25
- **MobiliTec** Halle/Hall 25, FG
- **IndustrialGreenTec** Halle/Hall 26
- **Digital Factory** Halle/Hall 7
- **Research & Technology** Halle/Hall 2

03/2012 · Änderungen vorbehalten · Modifications reserved 120314

Source: Fisba Optik GmbH

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