



The 13th Mechatronics Forum International Conference (Mechatronics 2012)

Linz, AUSTRIA
September 17-19, 2012

Organised by the Austrian Center of Competence in Mechatronics and the Johannes Kepler University
for the
IMechE Mechatronics Informatics and Control Group,
incorporating the Mechatronics Forum

The Mechatronics Forum conferences are the oldest series of mechatronics conferences still established. It succeeded in bringing together mechatronics experts from all over the world in order to present and discuss new results and trends in mechatronics and to act as a stimulus for intensifying mechatronic approaches in research and product development.

In this 13th event the industrial implementation of mechatronics shall be given proper space without losing sight of the approved scientific accents. The involvement of industry shall be particularly stimulated by mini-symposia devoted to mechatronic problems, approaches, or solutions of certain industrial branches or product ranges.

The scope

The scope of this conference covers any of the mechatronics disciplines, in particular but not exclusively:

- **Controlled mechanical systems, robots, and adaptronics:** modelling and simulation, control, sensing and image processing, path planning and gait control; artificial intelligence in robotics; experimental realization and very advanced industrial applications.
- **Drives and actuators:** employing electrical, hydraulic, pneumatic, or other principles; novel or very advanced solutions, their modelling, simulation and control and novel applications.
- **Sensors, measurement systems and signal processing, pattern recognition:** novel sensor principles, sensors and actuators in micro-systems, sensing of small quantities, sensor systems, wireless sensing.
- **Control of mechatronic systems:** new and advanced control algorithms, learning control, control in an information rich world, control of complex processes.
- **Industrial wireless communications in mechatronics:** wireless sensor and actuator networks, wireless networked control systems, wireless robotics.
- **Mechatronic design:** case studies, model based mechatronic design, system modelling, e.g. by UML or SysML, mechatronic design aspects of large complex systems
- **Mechatronic education:** teaching of mechatronic aspects, mechatronic curricula, unconventional courses.

Minisymposia

Minisymposia within the conference can be proposed for any mechatronic topic; applicants are requested to organize their minisymposium in close coordination with the organization committee.

Minisymposia for the following topics are already planned:

- **Model-based Mechatronic System Design** (P. Hehenberger – JKU, J. Wikander – KTH, A. Flick – SIEMENS VAI)
- **Mechatronics for Fluid Power – Fluid Power for Mechatronics** (B. Manhartgruber – JKU, A. Plummer – Bath University, B. Winkler – LCM)
- **Mechatronics for Production Systems** (K. Wegener – ETH Zurich)
- **Structural Health Monitoring** (M. Schagerl – JKU)
- **Robust Microsystems for Harsh Environments** (U. Schmid – TU Vienna)
- **Human Adaptive and Friendly Mechatronics** (M. K. Habib – American University in Cairo)
- **Model-based Automotive Control** (D. Alberer – JKU)
- **Model Based Control in Mechatronics** (K. Schlacher – JKU)

Participants interested in contributing to one of these and further symposia are requested to contact the respective organizers. The list of minisymposia and organizers' contact data will be published at the conference homepage.

Conference Proceedings

All submitted papers will be reviewed. Accepted papers will be published in the conference proceedings.

Important dates

Mini-symposia proposals	November 25, 2011
One page abstract:	January 22, 2012
Preliminary acceptance	February 11, 2012
Draft paper (6-8 pages)	April 23, 2012
Final decision, review comments	June 15, 2012
Final paper	July 23, 2012

Registration

Please register via the **conference homepage**:

<http://www.mechatronics2012.com>

Registration fee

Full registration (includes gala dinner):	€ 500,--
One day participation (w.o. gala dinner):	€ 250,--
Gala dinner (extra ticket)	€ 60,--
Students	€ 290,--

Late registration (after August 1st, 2012)

Extra charge	€ 50,--
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Accommodation

Special rate hotels of various price categories are offered for participants. Find detailed offers on the conference homepage.

Venue



The conference will be held at the campus of the Johannes Kepler University in Linz. The university, which is particularly renowned for its engineering department, was the first to introduce a full mechatronics curriculum at university level worldwide. The campus is nicely situated in the northern part of Linz bordering the picturesque region "Mühlviertel" and can be conveniently reached by public transport (tramway) from the city centre.

Linz itself (pop. ~200.000) is the capital of Upper Austria ("Oberösterreich"), a highly dynamic state with respect to technology and industry, tourism, and culture. Linz was the European Capital of Culture in 2009 and an attractive city featuring scenic surroundings. The latter include the Salzkammergut (~1h trip from Linz), which, with its numerous lakes and mountains, offers many leisure opportunities. Other major Austrian cities including Vienna and Salzburg can be conveniently reached by train.

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Rudolf Scheidl
Conference Chair