

PROGRAMME

**International Student Conference on Microtechnology**

**Research highlights – networking – career building**

8th-14th October 2012, Department of Microsystems Engineering (IMTEK) at the  
University of Freiburg, Germany

**Monday, 8th October 2012**

8:30-9:00	Registration
9:00	<b>Welcome address</b>
	Moderation of the morning programme: Ingolf Baur, Dipl. Phys. and Science journalist, 3sat - SWR - Deutsche Welle
09:30	<b>Keynote lecture on the lead topic "Mobility": Sensors for individual mobility</b> Dr. Markus Ulm, Robert Bosch GmbH
10:30-11:00	Coffee break
11:00-12:30	<b>Forum on the lead topic "Mobility"</b>
	<b>New Concepts for economical vehicles</b> Prof. Dr. Ulrich Hochberg, Hochschule Offenburg
	<b>Silicon carbide based microsensors for harsh environment automotive applications</b> Dr. Tino Fuchs, Robert Bosch GmbH
	<b>A novel approach for MEMS-based uncooled RTFIR imagers</b> Ingo Herrmann, Robert Bosch GmbH
12:30-13:30	Lunch break at the ETAGE convention centre of the energy agency
13:30-16:45	<b>Job application seminar for job starters</b> Rainer Schmidt, D. und R. Schmidt GbR

*In cooperation with*

16:45-17:00	Coffee break
17:00-18:00	<p><b>Workshop - Creativity Team Contest</b>  Department of Microsystems Engineering (IMTEK), University of Freiburg  Let's experience the fun of being creative! Groups of four University Conference participants will team up every afternoon to elaborate THEIR solution to a simple technical challenge. Creativity techniques and guidance through the technical aspects of the challenge will be provided by experienced staff. The proposed solutions will be briefly presented by the groups to all other conference participants. Winning teams will be selected and awarded a prize.</p>

## Tuesday, 9th October 2012

	Moderation of the morning programme: Ingolf Baur, Dipl. Phys. and Science journalist, 3sat - SWR - Deutsche Welle
9:00	<p><b>Keynote lecture on the lead topic "Health":</b>  <b>The future of diabetes management: Innovative solutions</b>  Dr. Alexander von Massow, Roche Diagnostics GmbH</p>
10:00-10:30	Coffee break
10:30-12:00	<b>Forum on the lead topic "Health"</b>
	<p><b>Application-oriented research: Intelligent implants for diagnostic and therapy</b>  Dr. Alfred Stett, Natural and Medical Sciences Institute at the University of Tübingen</p> <p><b>Microtechnology for diagnostics and medicine</b>  Prof. Dr. Roland Zengerle, Department of Microsystems Engineering (IMTEK), University of Freiburg</p>
12:00-13:00	Lunch break at the ETAGE convention centre of the energy agency
13:00-14:30	<p><b>Science Presentation Competition</b>  University of Applied Sciences Furtwangen  To introduce scientific topics in a form different from strictly academic presentations and to release science from its academic isolation is the idea of the Science Presentation Competition. Like in a "poetry slam", students and young scientists will present their research in just ten minutes as vividly and entertainingly as possible, while staying scientifically correct. Their performance will be rated directly by the audience. Subjects and areas of the presentations are widely open, as long as they relate to science or engineering. It will be essential is to please the audience, hence originality and entertainment value of the presentations will be rated most heavily. Winners will be presented an award.</p>
14:30-15:00	Coffee break
15:00-17:00	<p><b>Workshop - Creativity Team Contest (cont'd)</b>  Department of Microsystems Engineering (IMTEK), University of Freiburg</p>

## Wednesday, 10th October 2012

	Moderation of the morning programme: Prof. Dr. Ulrich Mescheder, University of Applied Sciences, Furtwangen
9:00	<b>Keynote Lecture on the lead topic "Smart Systems Integration"</b> <b>Smart Systems Integration</b> Prof. Dr. Leonard Reindl, Department of Microsystems Engineering (IMTEK), University of Freiburg
10:00-10:30	Coffee break
10:30-12:00	<b>Forum on the lead topic "Smart Systems Integration"</b>
	<b>Smart orthodontics for a healthier bite</b> Prof. Dr. Oliver Paul, Department of Microsystems Engineering (IMTEK), University of Freiburg  <b>SensRFID: Smart RFID-systems with integrated low-power sensors and energy harvester</b> Carolin Peter, The Fraunhofer Institute for Physical Measurement Techniques IPM  <b>Smart textiles – developments at ITV</b> Hansjürgen Horter, Institute of Textile Technology and Process Engineering Denkendorf (ITV)
12:00-13:00	Lunch break at the ETAGE convention centre of the energy agency
13:00-14:30	<b>Science Presentation Competition (cont'd)</b>
14:30-15:00	Coffee break
15:00-17:00	<b>Workshop - Creativity Team Contest (cont'd)</b> Department of Microsystems Engineering (IMTEK), University of Freiburg

## Thursday, 11th October 2012

	Moderation of the morning programme: Prof. Dr. Oliver Paul, Department of Microsystems Engineering (IMTEK), University of Freiburg
9:00-10:00	<b>Keynote Lecture on the lead topic "Energy in the 21st century"</b> <b>The role of renewable energy in the 21st century</b> Prof. Dr. Eicke Weber, The Fraunhofer Institute for Solar Energy Systems ISE
10:00-10:30	Coffee break
10:30-12:00	<b>Forum on the lead topic "Energy in the 21st century"</b>
	<b>Micro Energy Harvesting</b> Prof. Dr. Peter Woias, Department of Microsystems Engineering (IMTEK), University of Freiburg

	<p><b>Biofuel Cells - direct electricity from renewable sources</b> Joana Danzer and Sabine Sane, Department of Microsystems Engineering (IMTEK), University of Freiburg</p> <p><b>Electret based energy harvesting for microsystems</b> Prof. Dr. Ulrich Mescheder, Institute for Applied Research, University of Applied Sciences Furtwangen</p>
12:00-16:30	<p><b>Job Fair</b> A job fair with leading companies in the microtechnology area from the cluster region offers direct contacts and networking opportunities for a professional career.</p> <p><i>Instead of lunch at the ETAGE convention centre of the energy agency, there will be a locally warm/cold fingerfood for the registered participants in the beginning of the job fair.</i></p>
16:00-18:00	<p><b>Presentations and wrap-up of the Creativity Team Contest</b> Department of Microsystems Engineering (IMTEK), University of Freiburg</p>
18:00-21:00	Get-together with regional gastronomic specialties

## Friday, 12th October 2012

	Moderation of the morning programme: Prof. Dr. Oliver Paul, Department of Microsystems Engineering (IMTEK), University of Freiburg
9:00-10:00	<p><b>Keynote Lecture</b> <b>Metamaterials for transformation-physics</b> Prof. Dr. Martin Wegener, Karlsruhe Institute of Technology (KIT)</p>
10:00-10:30	Coffee break
10:30-11:00	<p><b>Award Ceremony of the Creativity Team Contest and the Science Presentation Competition</b> Prof. Dr. Ulrich Mescheder, Institute for Applied Research, University of Applied Sciences Furtwangen Prof. Dr. Oliver Paul, Department of Microsystems Engineering (IMTEK), University of Freiburg</p>
11:00-12:00	<p><b>Closing Session of the International Student Conference on Microtechnology</b> <b>Conclusions and future prospects</b> Prof. Dr. Ulrich Mescheder, Institute for Applied Research, University of Applied Sciences Furtwangen Prof. Dr. Oliver Paul, Department of Microsystems Engineering (IMTEK), University of Freiburg</p>
12:00-13:00	Lunch break / End of the conference
14:00	<p><b>Start of the free Post Conference Programme, 12th-14th October 2012</b> The program will be organized by bw-i Baden-Württemberg International. The</p>

two-and-a-half day post conference programme will give participants the opportunity to learn more about the cluster microTEC Südwest (Southwest) and its members, as well as the region. The programme comprises site visits to renowned microtechnology companies and cutting-edge research institutions in this field. It will end around 14:00h on Sunday, 14th October, in Freiburg.

**For further details on the free Post Conference Programme please download its programme on [www.microtec-career.com](http://www.microtec-career.com)**