MicRO Alliance Workshop, Sept. 24-25, 2015

IMTEK, University of Freiburg
Georges-Köhler-Allee 101, 79110 Freiburg

Program

Status: Sept. 19, 2015

Thursday, Sept. 24: Get-together

Lab Visits at IMTEK
15:00-18:00  Meeting point, Building 103, Entrance Hall

Get-together at Hotel Stadt Freiburg
18:30  Meeting room

Friday, Sept. 25: Open Workshop

08:00-08:45  Registration
Building 101, Foyer

Session 1
Seminar Room 101-02-016/18

08:45-09:00  Welcome: Oliver Paul, Wolfram Burgard, Ulrike Wallrabe

09:00-09:25  Talk 1 (Freiburg):  Thomas Stieglitz
Neural implants in basic and translational research

09:25-09:50  Talk 2 (Kyoto): Koichi Nakamura
First-principles approach to thermoelectric properties in low-dimensional materials
09:50-10:15 **Talk 3 (Michigan): Kensall Wise**  
*Neural Interfaces: Past Progress and Continuing Challenges*

10:15-10:40 **Talk 4 (Kyoto): Kentaro Kawai**  
*In-liquid nanopore formation using pulse-voltage injection toward nanopore DNA sequencing*

### Coffee break
10:40-11:10 Seminar Room 101-02-016/18 and Foyer, for guests and registered participants only

### Session 2
Seminar Room 101-02-016/18

11:10-11:35 **Talk 5 (Michigan): Euisik Yoon**  
*Mishigan Probes: Pathway to High-Density Recording and Optical Stimulation*

11:35-12:00 **Talk 6 (Kyoto): Ken-ichiro Kamei**  
*Body on a Chip: Towards new generation of drug screening*

12:00-12:25 **Talk 7 (Freiburg): Alexander Rohrbach**  
*Optical tweezers in micro- and nano-technology*

12:25-12:50 **Talk 8 (Michigan): Jianping Fu**  
*Micro/Nanoengineering Tools for Stem Cell Mechanobiology*

### Lunch
12:50-14:00 Solar Info Center Restaurant for guests and registered participants only

### Poster session
Building 101, Foyer  
14:00-15:00 *Authors and titles cf. separate program*

### Session 3
Seminar Room 101-02-016/18

15:00-15:25 **Talk 9 (Kyoto): Shinji Takayanagi**  
*Fabrication of thickness-shear mode resonator with c-axis parallel oriented ZnO film and its application to micro liquid viscometer*

15:25-15:50 **Talk 10 (Michigan): Shuichi Takayama**  
*Microfluidic Transistor Circuits and Studies of Biological Oscillations*

15:50-16:15 **Talk 11 (Kyoto): Toshiyuki Tsuchiya**  
*Fracture and fatigue of Silicon in Micro/Nanosystem*

16:15-16:40 **Talk 12 (Freiburg): Jürgen Rühe**  
*Tailormade Surfaces for the Generation of Novel Microsystems and Engineered Biointerfaces*
### Coffee break

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<tr>
<th>Time</th>
<th>Location</th>
<th>Details</th>
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<tbody>
<tr>
<td>16:40-17:10</td>
<td>Seminar Room 101-02-016/18 and Foyer</td>
<td>for guests and registered participants only</td>
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### Discussion of MicRO Alliance matters

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>17:10-18:30</td>
<td>Meeting room Building 103</td>
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<tr>
<td>18:30</td>
<td>Adjourn and back to Hotel</td>
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### Dinner

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<tr>
<td>19:30</td>
<td>Restaurant Roter Bären, Oberlinden</td>
<td>For invited participants only</td>
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<td>Departure from lobby Hotel Stadt Freiburg at 19:00</td>
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Mechanical Deformation of Thin Films induced by electrical Stimulation

A. Müller / M. Pauls, Chair for Microactuators
BrainLinks-BrainTools Project COLUMNS

F. Larramendy, Chair for Microsystem Materials

D. Ashouri Vajari, Chair for Biomedical Microtechnology

In-vitro Stability of Hybrid Deep Brain Stimulation (DBS) Probe

M. Alt / L. Rudmann, Chair for Biomedical Microtechnology

BrainLinks-BrainTools Project WOLDOR

J. Erhardt, Chair of Biomedical Microtechnology

BrainLinks-BrainTools Project NEUMARE

R. Michiels, Chair for Bio- and Nano-Photonics

Nano-mechanical concepts of cellular protrusions for sensing and actuating

M. Schwaerzle, Chair for Microsystem Materials

BrainLinks-BrainTools Project WOLDOR

F. Pothof, Chair for Microsystem Materials

128-Channel Deep Brain Recording Probe with Heterogeneously Integrated Analog CMOS Readout for Focal Epilepsy Localization

F. Becker, Chair for Microsystem Materials

A Novel Instrumented Tooth with 10-fold Increase in Force Resolution.

C. Gossler, Chair for Microsystem Materials

Optrodes with arrays of integrated micro-LEDs

L. Rudmann, Chair for Biomedical Microtechnology

Heat treatment of photoresist to fabricate customized microlenses for implantable hermetic micropackages

... and more posters, to be displayed on short notice
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<tr>
<td>15:00-15:30</td>
<td>Welcome and introduction to Faculty of Engineering and IMTEK</td>
<td>Oliver Paul, building 103</td>
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<td>15:30-15:55</td>
<td>Cleanroom Service Center RSC,</td>
<td>Michael Wandt, building 104</td>
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<td>16:00-16:25</td>
<td>Bio- and Nanophotonics Lab</td>
<td>Alexander Rohrbach, building 102</td>
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<td>16:30-16:55</td>
<td>Micro-optics Lab</td>
<td>Caglar Ataman and Daniel Kopp, building 102</td>
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<tr>
<td>17:00-17:25</td>
<td>Microactuators Lab</td>
<td>Angelina Müller, Michael Pauls, Matthias Wapler, building 102</td>
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<td>17:30</td>
<td>Biomedical Microtechnology Lab</td>
<td>Juan Ordonez, building 102</td>
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Subsequently: Walk back to Hotel for get-together at 18:30
Location Map

MicRO Alliance Workshop 2015
Sept 24-25, 2015

Venue: Georges-Köhler-Allee 101 and 103
Faculty of Engineering (Technische Fakultät)
University of Freiburg, Germany

Building 103 (Labs/offices)
- Meeting point for lab tours,
  Sept 24, 3pm
- Consortium meeting
  Sept 25, 17:10

Building 101 (Foyer)
- Scientific presentations
- Poster session
- Coffee breaks

Arrival by taxi,
c.a. 10-15 € and 5-10 min.
from main station or downtown

Arrival on foot,
c.a. 5-10 min. from Hotel Stadt Freiburg

Parking space
- Permit required

Solar Info Center
- Lunch + lunch coffee

OP, 21.09.2015
Location Map

MicRO Alliance Workshop 2015
Sept 24-25, 2015

Faculty of Engineering
Georges-Köhler-Allee 051-106
(see detailed map)

5-10-min. walk
Sorry for the still on-going street car construction site!

Hotel Stadt Freiburg
Breisacherstrasse 84

OP, 19.09.2015