

Registration Card

Please return the registration to the  
Fraunhofer IZM, Munich Branch of the Institute

Fraunhofer-Institut für  
Zuverlässigkeit und Mikrointegration IZM  
c/o Frau Diliانا Panayotova

Hansastr. 27d

D - 80686 München

Fax.: + 49 89 54759-196

GENERAL TERMS AND CONDITIONS  
FOR FRAUNHOFER IZM SEMINARS

Registration

Please register in writing to Fraunhofer-Institute for Reliability and Microintegration IZM, or fax to +49 (0)89/54759 196.  
Registrations are acknowledged on a first come, first served basis and will be confirmed immediately by mail.  
All data that you transmit with your registration will be stored electronically only for internal use.

Cancellation

Please address a cancellation in writing to Fraunhofer IZM (Ms. D. Panayotova). If a registration is cancelled less than 4 weeks before the seminar, we will charge a cancellation fee of 40,- Euro. The total workshop fee falls due in case of cancellation within the last two weeks. The substitution of registered participants is possible.

Changes

Fraunhofer IZM reserves the right, especially in the event of an insufficient number of participants or illness of the lecturers, to call off seminars. Any paid seminar fees will be returned in this case. Any further claims are excluded. In exceptional cases Fraunhofer IZM reserves the right to change date, site or lecturer to a reasonable extent. The registration can be cancelled in case of changes to date and place.

Seminar Fees

Seminar fees become due without reduction immediately after receipt of the invoice.

The one-day workshop costs 290,- € including seminar proceedings and catering.

How to find us



By Car:

From the motorway, please drive into the city until you reach the Mittlerer Ring.

Approaching from the North, at the exit »Laim« please turn right into Tübinger Strasse, then right into Dillwächterstrasse and right again into Hansastrasse. The Institute is approx. 100m up the road on the left side.

Approaching from the South, please take the exit »Sendling«. Then cross Tübinger Strasse and turn left into Hansastrasse; the Institute is approx. 20m up the road on the right side.

By Train:

From Munich Central Station please take the underground (U-Bahn) no. 4 or 5 with destination "Laimer Platz" or "Westendstraße" and get off at the »Heimeranplatz« station. Go towards the exit in direction of travel, then use exit »Hansastraße«. The Institute is on the left side.

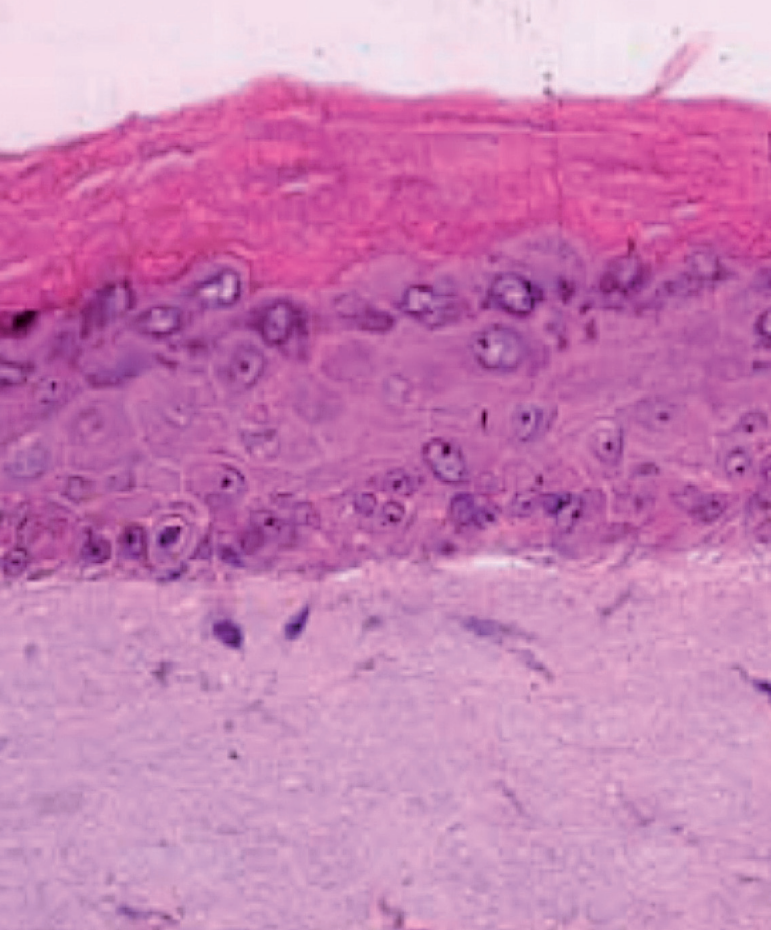
By Plane:

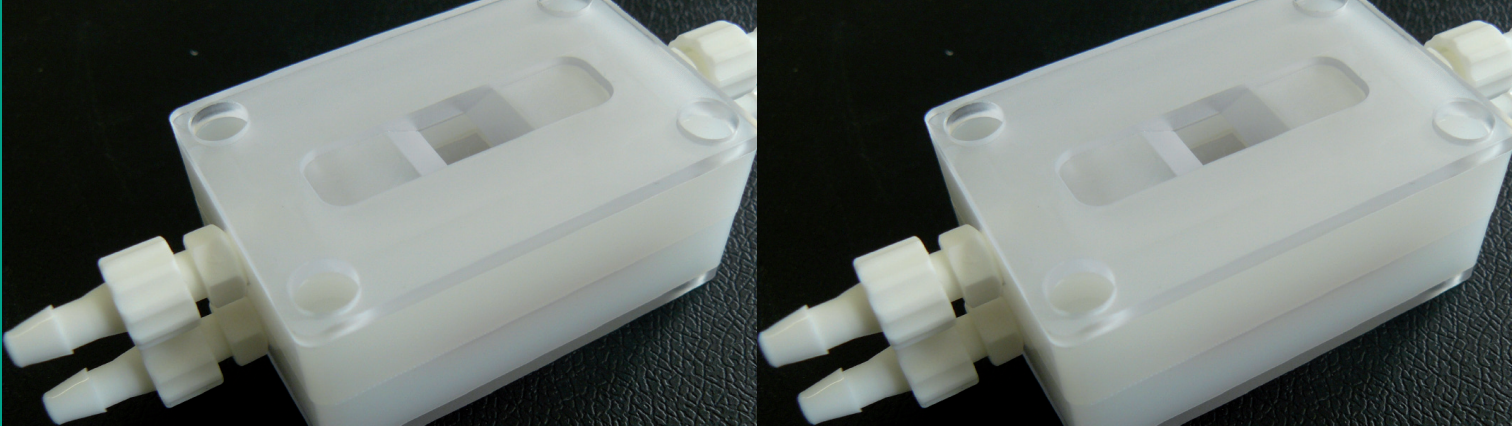
From Munich airport, please take the rapid transit (S-Bahn) no. 8 or no. 1 to Munich central station. Further see »By Train«.



FRAUNHOFER-INSTITUTE FOR RELIABILITY AND  
MICROINTEGRATION IZM  
MUNICH BRANCH

WORKSHOP  
MICROFLUIDICS FOR CELLS  
»TOOLS FOR TISSUE ENGINEERING«  
OCTOBER 20, 2009





# MICROFLUIDICS FOR CELLS

## »TOOLS FOR TISSUE ENGINEERING«

### Invitation to the workshop

Since 2002, this annual workshop focuses on microfluidic applications, illustrating current research as well as emerging industrial applications in this field.

The use of microfluidic tools is a key technology in tissue engineering. Within that field there are various applications like cell analysis systems for bioavailability or toxicity, quick cell sorters, cell release tools, new materials for implants, bioreactors, cell injectors and many more. Microfluidic tools can help to industrialise these technologies. A synopsis of state of the art research and of the various industrial applications is presented at this workshop.

In addition to the industrial viewpoint, theoretical and design aspects of the topic “microfluidic tools for the tissue engineering” will be introduced to the participants. The workshop will be rounded off by exemplifying the latest research efforts.

This one-day workshop at the Fraunhofer IZM in Munich is relevant for engineers, scientists, and entrepreneurs who already utilise microfluidics for cells or plan to use them in the future and to acquire or deepen relevant knowledge in this field. The workshop has even more to offer: joint discussions with the speakers allow exchanging experience; exhibits and posters visually support the lectures.

#### CONTACT

Workshop moderation: M. Richter, Fraunhofer IZM  
Workshop registration: Diliana Panayotova, Fraunhofer IZM  
Telephone: (089) 54 759 - 326  
Fax: (089) 54 759 - 196  
E-mail: Diliana.Panayotova@izm-m.fraunhofer.de

### Programme

Tuesday, 20<sup>th</sup> October 2009

Location: Fraunhofer IZM, seminar room, 2<sup>nd</sup> floor

- 9.00 Introduction**  
H. Reichl, M. Richter, Fraunhofer IZM
- 9.10 Microfluidics for Cells: Trends and Applications**  
H. Mertsching, University of Würzburg
- 9.50 Bioreactor with Integrated High Performance Micropumps for Skin and Colon Tissues**  
M. Herz, Fraunhofer IZM, Munich
- 10.10 Short Summary on Validation of Bioreactors for Industrial Use**  
G. Hager, Aurigon GmbH, Munich
- 10.30 Coffee break**
- 11.00 Programmable Lab on a Chip System for Single Cell Analysis**  
S. Thalhammer, Helmholtz Zentrum, Munich
- 11.20 Generating Renal Tubules at an Artificial Interstitium**  
W. Minuth, University of Regensburg
- 11.40 S.CORE: New Options for Automatic Image Analysis in Life Science Research**  
M. Eblenkamp, S.CO LifeScience GmbH
- 12.00 Lunch (Buffet)**

### Programme

Tuesday, 20<sup>th</sup> October 2009

- 13.00 Cell Based Assays for Marker Free Monitoring of Living Cells**  
J. Wiest, cellasys GmbH, Munich
- 13.30 Microchip for Cell Injection**  
T. Velten, Fraunhofer IBMT, St. Ingbert
- 13.50 Oxygen Measurements in 3D Culture Systems for Tissue Engineering of Bone**  
M. Schieker, surgical hospital, University LMU Munich
- 14.10 Coffee break**
- 14.40 Cell Release with Megasonic Sound**  
S. Prentner, Fraunhofer IZM, Munich
- 15.00 Sensor System for On-line Monitoring of Cell Cultures**  
C. Moldovan, IMT Romania
- 15.20 Microstructures for Cell Cultivation**  
F. Pretsch, Fraunhofer IPT, Aachen
- 15.40 Coffee break**
- 16.10 Particle Simulation Techniques for Microflows**  
N. Adams, Institute for Aerodynamics, TU Munich
- 16.30 Cell on Chip Biosensor for Detection of Cell to Cell Interactions**  
E. Jung, K. Heinrich, Fraunhofer IZM
- 16.50 End of the workshop**

### Registration Card

Please confirm your participation by October 12, 2009.

☒ I will participate in the seminar „Microdosing Systems“ on October 20, 2009, at the Fraunhofer IZM Munich, Hansastrasse 27d.

I have read and acknowledge the participation conditions.

Please provide the following information:

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*Title / first name / surname*

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*Position / department*

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*Company*

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*Postal Code / City*

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*Signature*

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