IMTEK – Lab for MEMS Applications

We develop new tools for life sciences that make diagnosis quicker and therapy more efficient.

Prof. Dr. Roland Zengerle

Our R&D activities focus on microfluidics, micro-analytical platforms and system integration, supported by front-end research facilities and highly skilled and multi-disciplinary personnel from various fields.

Experts in Microfluidics and Bio-MEMS

In close cooperation with the Institut für Mikro- und Informationstechnik of the Hahn-Schickard-Gesellschaft **(HSG-IMIT)**, we focus on solutions that meet the needs of society as well as the market. Our main areas of operation are: Contact-Free Microdosage Technologies, Lab-on-a-Chip, Microfluidic and Biological Engineering, Biofuel Cells, Porous Media, Micro Medical Technology, Thermal Sensors.

Lab for MEMS Applications
Department of Microsystems Engineering – IMTEK
University of Freiburg

Georges-Koehler-Allee 103
79110 Freiburg, GERMANY

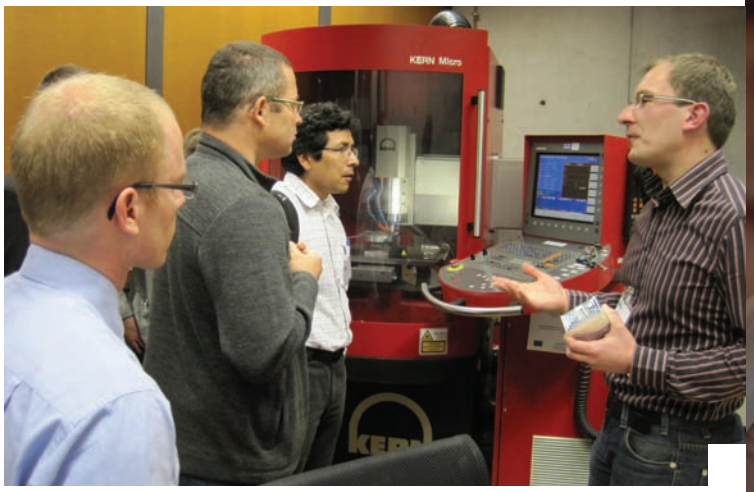
Phone: +49 (0)761 203-73202
www.imtek.de/applications

HSG-IMIT

HSG-IMIT is an application and product oriented R&D provider for micro engineering and lab-on-a-chip systems. It is located in Freiburg and Villingen-Schwenningen and employs 130 scientists and engineers.

In close cooperation with IMTEK, the Department of Microsystems Engineering of the University of Freiburg, HSG-IMIT offers assay automation, miniaturization and integration based on its centrifugal microfluidic platforms LabDisk and LabTube.

HSG-IMIT also offers a Lab-on-a-Chip Design & Foundry Service which provides customers with all steps ranging from assay implementation such as assay specification, translation into microfluidic layout, to simulation and lab-on-a-chip prototyping up to functional testing in the S1 and S3** labs.



HSG-IMIT – Institut für Mikro- und Informationstechnik der Hahn-Schickard-Gesellschaft e.V.

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www.hsg-imit.de/en/home

HSG-IMIT

IMTEK

Technical Tour

Thursday, October 31
14.00 – 16.15 pm

Your attendence is free of charge
We ask for registration

Visit our Labs!

Lab-on-a-Chip Prototyping
Lab-on-a-Chip Characterisation
Non-contact Microdosage
Microfluidic and Biological Engineering

Lab-on-a-Chip Prototyping

The Lab-on-a-Chip Prototyping group supports current developmental projects in the area of lab-on-a-chip by rapidly transferring microfluidic concepts into initial prototypes. The processes include the microstructuring of plastic substrates, surface modifications, sealing, and reagent pre-storage. By micromilling, channels of down to 30 µm are being created. The cut is then being replicated as a master through hot embossing of plastic plates or microthermoforming of foil substrates.

Dominique Kosse | dominique.kosse@hsg-imit.de

Lab-on-a-Chip Characterisation

The characterisation of Lab-on-a-Chip prototypes is performed in the laboratory for system integration. We show biological working areas for cultivation of pathogenic microorganisms, mammalian cell culture, nucleic acid extraction, real-time PCR, immunoassays, array read-out, electrophoresis and immunoblotting. Also different microfluidic test rigs for the investigation of pressure driven and centrifugal microfluidics will be presented. The full spectrum of tests is available to our customers.

Dr. Felix von Stetten | vonstetten@hsg-imit.de

Non-contact Microdosage

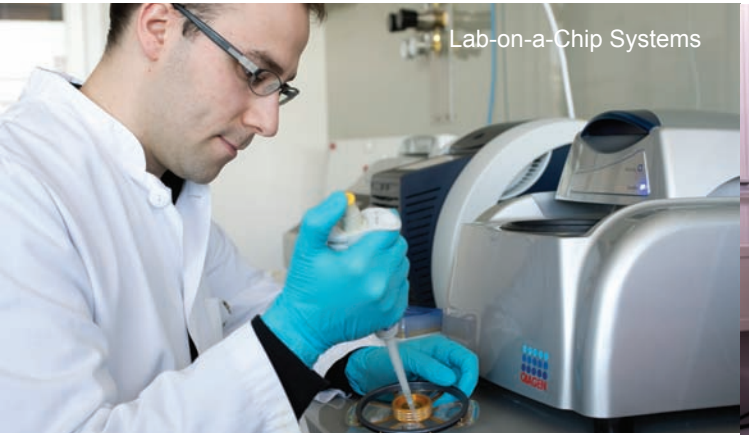
The group develops contact-free dosage systems for volumes of liquid in the micro range. The team also works with difficult media such as dissolved particles or living cells at a high flow capacity and with high parallelization. The developed systems have been implemented in a wide range of applications, ranging from the search for new active ingredients in the pharmaceutical industry to cost-effective printing of metallic conductors in the production of solar cells.

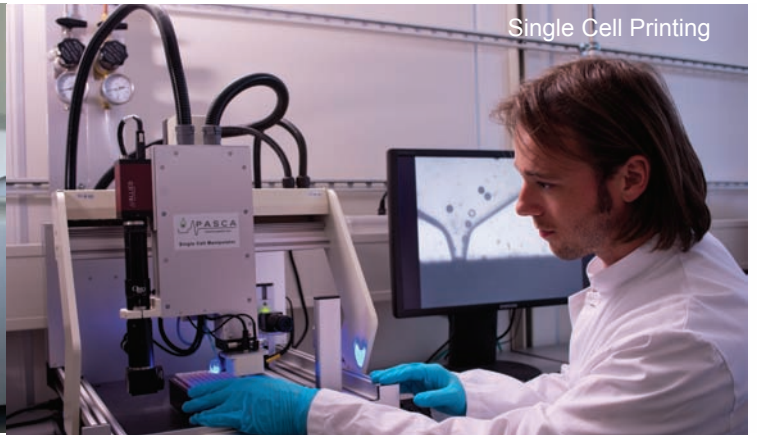
Dr. Peter Koltay | peter.koltay@imtek.de

Microfluidic & Biological Engineering

At the Laboratory for MEMS Applications and the Centre for Biological Signalling Studies (BIOSS) of the University of Freiburg, the group develops microfluidic and new biological technologies for the detection and design of biomolecular interactions. The applications of the new technologies are concentrated on various biological levels, such as the molecular, cellular, and organismal levels. The goal is to characterize and change biomolecular interactions in a system on various timescales and signalling paths.

Dr. Matthias Meier | matthias.meier@imtek.de


Lab-on-a-Chip Systems


Single Cell Printing

Program at a Glance

Venue: Faculty of Engineering
Georges-Koehler-Allee 102, 79110 Freiburg, GERMANY

14:00 Snacks & beverages
Outside Seminar room, Bldg. 102, 1st floor

14:15 Welcome & Introduction
Dr. Felix von Stetten
Seminar room, Bldg. 102, 1st floor

14:45 Start of Lab-Tour: 4 places à 20 mins
Buildings 103 & 104

16:15 End of Lab Tours

Going back to Freiburg main station

By local train:

Take Breisgau Bahn from „Neue Messe / Universität“ in direction of Freiburg Hauptbahnhof (= main station)
Departures: 17:02, 18:02 (3 mins to „Hauptbahnhof“)

By taxi:

Please call a taxi yourself by choosing one of these numbers:
+49 761 555555 (TAXI Freiburg) or
+49 176 21 15 22 57 (Aycil Abdullah Aydin)

By bus:

VAG-BUS 11 in direction „Freiburg Munzinger Straße“
Departures: 16:57, 17:27