

## Invitation

The Fraunhofer Institute IISB would cordially like to invite you to its 13<sup>th</sup> Annual Conference to be held on December 9, 2011 in Erlangen.

In Europe the IISB is one of the centers of competence in the fields of nanotechnology for electronics and of electronics for sustainable energy use. The major fields of its activities can be easily recognized in the pentagon shown below.



Since 2000, in its Annual Conferences the IISB highlights current developments in the different working fields of the institute. The Annual Conference 2011 is dedicated to Technology Simulation. Important requirements, developments, results, and trends in this area are presented in talks given by cooperation partners and scientists from the institute. At this occasion we commemorate the 35<sup>th</sup> anniversary of TCAD at Fraunhofer and the 70<sup>th</sup> birthday of one of its mentors and promoters Prof. Heiner Ryssel.

We would cordially like to invite you for participation.

With our best regards,

Lothar Frey and Jürgen Lorenz

## Department Technology Simulation

The overall goal of the Technology Simulation Department is the support of semiconductor companies, their suppliers and other research institutes in the development of future microelectronics. To this end, the department conducts R&D in the main areas:

- Development of physical models
- Evaluation of models and extraction of model parameters
- Implementation of models into leading-edge process simulation software
- Development of problem-specific algorithms
- Application for the development and optimization of semiconductor fabrication equipment and processes, devices, and circuits.

These are those areas of Technology Computer Aided Design which are closest to semiconductor technology.

In order to be able to make optimum contributions to the worldwide progress, the department closely cooperates with semiconductor companies, their suppliers of equipment, masks and materials, software houses, research institutes and universities in Germany, Europe and around the world. It promotes broad cooperations of key players especially by the initiation and coordination of joint research projects, especially within the ICT programme of the European Union. Furthermore, the department has for several years actively promoted the establishment of common industrial specifications in the area of TCAD, and their transfer into related research projects. Currently, this latter activity includes the responsibility for the Modeling and Simulation chapter of the International Technology Roadmap for Semiconductors ITRS where the head of the Technology Simulation department since 2002 acts as the chairperson.

More information regarding IISB and its Technology Simulation department can be found at <http://www.iisb.fraunhofer.de>.

## Program December 9, 2011

|       |  |
|-------|--|
| 9:00  | <b>Welcome</b><br>Dr. J. Lorenz, Fraunhofer IISB   |
| 9:10  | <b>Challenges for Predictive EUV Simulation</b><br>Dr. P. Evanschitzky, Dr. A. Erdmann, Fraunhofer IISB                |
| 9:35  | <b>Photomask Metrology: Challenges and Solutions</b><br>NN, Zeiss  |
| 10:00 | <b>Proximity Lithography Simulation for next Generation Flat Panel Displays</b><br>N. Ünal, GenISys GmbH               |
| 10:25 | <b>Advanced Lithography Simulation: A Case Study Using Dr.LiTHO</b><br>T. Fühner, Fraunhofer IISB                      |
| 10:50 | Coffee break and software demonstrations   |
| 11:30 | <b>Topography Simulation for Lithography Masks</b><br>O. Rudolph, Fraunhofer IISB                                      |
| 11:55 | <b>Process Variations – from Topography to Circuits</b><br>Dr. E. Bär, Dr. J. Lorenz, Fraunhofer IISB                  |
| 12:20 | <b>Variation Impact on Circuits and Systems (tbc)</b><br>R. Jancke, Fraunhofer IIS/EAS                                 |
| 12:45 | Lunch  |
| 13:45 | <b>Variability in High Performance Analog Semiconductor Manufacturing</b><br>Dr. R. Minixhofer, austriamicrosystems    |
| 14:10 | <b>Simulation for Power Electronics</b><br>Dr. S. Koffel, Fraunhofer IISB  |
| 14:35 | <b>Model Development for Low Power Electronics</b><br>M. Hackenberg, Fraunhofer IISB                                   |
| 15:00 | <b>Device Simulation for Future Technologies</b><br>Dr. A. Burenkov, Fraunhofer IISB                                   |
| 15:25 | Coffee break and software demonstrations   |
| 16:15 | <b>Anniversaries: TCAD and Prof. H. Ryssel 35 Years of Technology and Simulation</b><br>Dr. J. Lorenz, Fraunhofer IISB |
| 16:40 | <b>Final remarks</b>   |
| 17:00 | <b>Guided tour through the institute (advance registration necessary)</b>  |
| 17:00 | <b>Franconian dinner in the cafeteria of IISB</b>  |

## Reply Form

Please return this form until **November 25, 2011** to  
**Fraunhofer Institut für Integrierte Systeme und  
 Bauelementetechnologie IISB**

**Fax +49 (0) 9131 / 761-212**

I will participate

- in the conference
- in a guided tour through the institute
- in the dinner

I cannot participate, but I would like to receive  
 further information about

- Semiconductor Technology
- Semiconductor Manufacturing Equipment & Methods
- Technology Simulation
- Crystal Growth
- Power Electronic Systems

## Address

Title, First Name, Name

Institution, Company

Street

City

Phone

Fax

E-mail

Date, Signature

Please use a separate reply form for each person

## Further Information

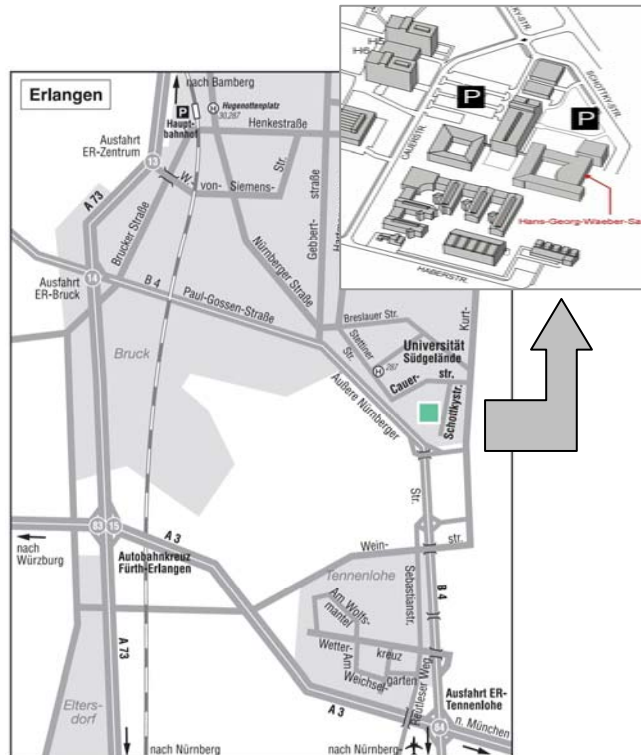
**Address** Fraunhofer Institut für Integrierte  
 Systeme und  
 Bauelementetechnologie IISB  
 Schottkystrasse 10  
 91058 Erlangen

**Location** The presentations will be given in the  
 Hans-Georg-Waeber Lecture Hall of  
 the institute.

**Registration** In order to organize the conference  
 efficiently we kindly ask for your reply  
 by the enclosed fax form **until  
 November 25, 2011.**  
 We offer a guided tour through the  
 institute for registered participants.

## How to find us

Further information can be found: <http://www.iisb.fraunhofer.de/>



## IISB 13<sup>th</sup> Annual Conference

### Technology Simulation

Fraunhofer IISB  
 Erlangen, December 9, 2011

