

Location

Main Lecture Hall of Forschungszentrum Jülich
www.fz-juelich.de/how-to-reach-us/

Dates

Start of Workshop: Monday, 27 April, 2015
11:30 Registration
13:15 Welcome
Workshop ends: Thursday, 30 April, 2015
12:00 End of Scientific Programme

Workshop Fee

Full fee: 200 €
Student fee: 100 €
The fees include coffee breaks and two lunches.

Accommodation

A list of hotels and other accommodation in Jülich can be found on the Jülich Website [in German only]:
www.juelich.de/hotelsundpensionen/
More accommodation close to the research centre [website in German only]: www.burgobbendorf.de/

Registration

Please use our web form for registration:
www.jara.org/de/research/jara-fit/nanoelectronic-days/



Deadlines

15 March, 2015: Abstract submission
12 April, 2015: Registration

Organization

Jülich Aachen Research Alliance – Fundamentals of Future Information Technology (JARA-FIT)

What alternatives are there to computers based on crystals of silicon or other semiconductors? What is – from a physical point of view – the smallest possible device that can be used to perform computational processes? Is there a minimum amount of energy required for floating point operations? What kind of state variables and algorithms can be used beside charges and John von Neumann architectures? These are the questions that concern JARA-FIT researchers. The abbreviation „FIT“ stands for „Fundamentals of Future Information Technology“ and describes the tasks undertaken by the scientists in this section of JARA.

Conference Chairs:
Detlev Grützmacher, Rainer Waser, Matthias Wuttig

Conference Secretary

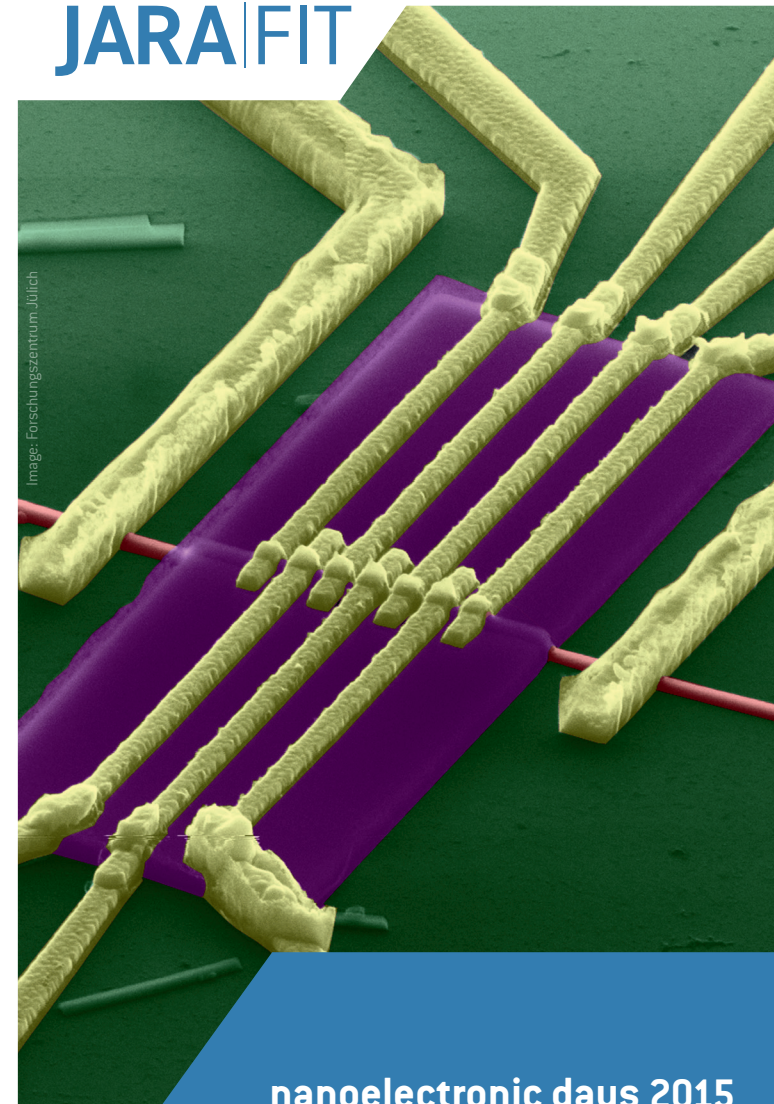
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For more information on the
nanoelectronic days 2015,
please visit our website:

www.jara.org/de/research/jara-fit/nanoelectronic-days/



JARA|FIT



nanoelectronic days 2015 “Green-IT”

Call for Papers
27 – 30 April 2015 | Jülich | Germany

Sponsored by:



AN INITIATIVE OF



Scope

The digital revolution has led to rapid growth in data acquisition, traffic and processing with increasing demands placed on energy consumption. IT products already consume more than 10% of the total electric power produced in the western world, making energy-efficient computing a key technology for the sustainable scaling of IT performance. Nanoelectronics has emerged as an independent and interdisciplinary research field, integrating knowledge, concepts and techniques covering many different spatial and temporal scales. The aim of the 2015 Nanoelectronic Days workshop on "Green-IT" is to bring together leading scientists from around the world to discuss and debate recent achievements and future challenges in energy efficient computing.



Omicron NanoTechnology GmbH | The nano-epitaxy laboratory (Nano-Cluster) of the Helmholtz Nanoelectronic Facility consists of a new kind of epitaxy cluster for highly-specialized applications.

Scientific Programme

The major topics covered by the workshop include both fundamental and applied research, focusing on energy-efficient information technology.

Sessions include:

- nanoscale and steep slope devices
- nanoswitches based on oxides and phase change materials
- silicon based photonics and terahertz electronics
- zero power systems
- new architectures and computational concepts

Presentations

The programme will consist of invited lectures, oral contributions and a poster session. The following invited speakers have confirmed their attendance:

- Adrian Ionescu – EPFL, Switzerland
- Stuart Parkin – Max Planck Institute Halle/Saale, Germany
- Heike Riel – IBM Rüschlikon, Switzerland
- Henning Riechert – Paul Drude Institute, Germany
- Lars Samuelson – Lund University, Sweden
- Stanley Williams – Hewlett-Packard, USA
- Matthias Wuttig – RWTH Aachen University, Germany
- Alexander Zaslavsky – Brown University, USA

Language: The conference language is English.



Forschungszentrum Jülich GmbH | Preparation of semiconductor wafers in the cleanroom facility for the development of nanoelectronic devices.

Venue

All scientific sessions will be held in the main lecture hall of Forschungszentrum Jülich, a member of the Helmholtz Association and one of Europe's largest research centres. Jülich is located in North Rhine-Westphalia, within easy reach of the cities of Cologne, Düsseldorf and Aachen. Forschungszentrum Jülich works towards comprehensive solutions for the grand challenges facing society in the future, in the three fields of energy and environment, brain research and information technology, thus laying the foundation for future key technologies. The research centre houses state of the art research facilities including a recently inaugurated clean room facility, the Helmholtz Nanoelectronic Facility. Conference participants are invited to take part in detailed laboratory tours.