

# HELMHOLTZ-SYMPOSIUM AACHEN 2013

## ON BIOMEDICAL ENGINEERING AND RELATED FIELDS

July 19th, 2013

### Location:

RWTH Aachen University Hospital, Pauwelsstrasse 30, Aachen, Germany

- **All lectures:** Lecture Hall 3 (Session I-VII)
- **Poster Exhibition Area, Coffee Breaks, Lunch Break & Get Together:** Seminar Room (Ground Floor / Corridor D/46 / Room 04).

### FINAL PROGRAM

**8:30-9:00 On-site Registration and Welcome**

**9:00-10:00 Session I: Biomaterials**

**(Chair: Prof. Dr. rer. nat. Lothar Elling, Biomaterials Laboratory, FB1)**

- Prof. Dr. rer. nat. Lothar Elling (Institute for Biology - Biomaterials): Introduction
- Prof. Dr. rer. nat. Alexander Böker (IPC and DWI, RWTH Aachen University): 2D- and 3D Architectures via Directed Self-Assembly of (Bio)Nanoparticles
- Prof. Dr. rer. nat. Ulrich Schwaneberg (Institute for Biotechnology and DWI, RWTH Aachen University): Protein Engineering for the Design of Protein-Polymer Systems

**10:00-11:00 Session II: Technical Innovations in Medical Engineering 1**

**(Chair: Prof. Dr. Ing. Dr. med. Steffen Leonhardt, Chair of Medical Information Technology, FB6)**

- Prof. Dr. Janina Fels (ITA, RWTH Aachen University, FB 6): "Advances in Medical Acoustics"
- Dr. Marcel Mathissen (FORD Research Aachen): "Health and Wellness Technologies at Ford Motor Company"
- Prof. Dr. Ing. Dr. med. Steffen Leonhardt (MEDIT, Helmholtz-Institute f. BME, RWTH Aachen University): "Automatic Control in Medicine"

**11:00-11:30 Coffee Break &**

**Poster Exhibition "Biomedical Engineering @ RWTH Aachen University"**



**16.00-17.00 Session VI Artificial Heart Valves – State of the Art  
(Chair: Prof. Dr. Thomas Schmitz-Rode, Chair of Applied Medical Engineering, FB10)**

- Prof. Dr. Rüdiger Autschbach (Dept. for Thoracic and Cardiovascular Surgery, University Hospital Aachen): Artificial Heart Valves - an Overview
- Priv.-Doz. Dr. med. Guido Dohmen (Dept. for Thoracic and Cardiovascular Surgery, St. Johannes-Hospital, Dortmund): Transcatheter Aortic Valve Implantation - Clinical Perspectives
- Prof. Dr. Ulrich Steinseifer (Dept. of Cardiovascular Engineering, Institute of Applied Medical Engineering, Helmholtz Institute, RWTH Aachen University): Engineering & Testing of Artificial Heart Valves
- Prof. Dr. Stefan Jockenhövel (Dept. of Tissue Engineering & Textile Implants, Institute of Applied Medical Engineering, Helmholtz Institute, & Institute of Textile Engineering, RWTH Aachen University): Tissue Engineering of Heart Valves.

**16.30-17.30 Session VII: Stem Cells in Biology and Disease  
(Chair: Prof. Dr. Martin Zenke, Chair of Cell Biology, FB10):**

- Prof. Dr. med. Steffen Koschmieder (RWTH Aachen University Hospital): Personalized Medicine in Leukemia.
- Steffi, Sontag, MSc (Institute for Biomedical Engineering - Cell Biology, RWTH Aachen University): Induced Pluripotent Stem Cells (iPS Cells)
- Prof. Dr. rer.nat. Martin Zenke (Institute for Biomedical Engineering - Cell Biology, RWTH Aachen University): The StemCellFactory.

**18:00-20.00 Get Together in the Poster Exhibition Area**

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**Program Chairs:**

Lothar Elling, Willi Jahnen-Dechent, Fabian Kießling, Steffen Leonhardt, Klaus Radermacher, Thomas Schmitz-Rode, Martin Zenke

Helmholtz Institute for Biomedical Engineering , RWTH Aachen University

# Registration Form

## Helmholtz Symposium 2013

on Personalized Biomedical Engineering and Related Fields

**July 19th, 2013**

RWTH Aachen University Hospital  
Pauwelsstrasse 30, Aachen, Germany

**Registration Deadline:** July 11<sup>th</sup> 2013

**Registration Fee (snacks & drinks included):** 20,- €

### Registrant Info:

First Name:
Last Name:
Degree(s):
Email:
Institution:
Address:
Zip Code & City, Country:
I submitted a camera ready poster proposal (< 1 MByte) to <a href="mailto:bme2013@rwth-aachen.de">bme2013@rwth-aachen.de</a> (only for registrants affiliated to RWTH institutions):
<input type="checkbox"/> YES <input type="checkbox"/> NO
Date & Signature:

The symposium will be organized in cooperation with the CEMPEG e.V., Aachen, c/o meditec, Pauwelsstrasse 20, 52074 Aachen, Germany

Upon receipt of your signed registration form, CEMPEG e.V. will issue and send an invoice to you via Email. An original invoice will be available onsite.

Payment can be made **via bank transfer (please provide the related bank receipt onsite)** or **cash onsite**.

Please Email or FAX this signed form **prior to July 11<sup>th</sup> 2013** (registration deadline) to:  
[bme2013@rwth-aachen.de](mailto:bme2013@rwth-aachen.de) or FAX: +49(0)241-80-22870