

Joined Kickoff Meeting of the **International Graduate Schools** **ABINEP and MEMoRIAL**

Sep-26, 2017 | Festung Mark, Magdeburg, GER

www.abinep.ovgu.de | www.memorial.ovgu.de | www.europa.sachsen-anhalt.de

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| 09:30–09:45 | Welcome by the OVGU Rectorate
Prof. Jens Strackeljan and Prof. Monika Brunner–Weinzierl |
| 09:45–09:50 | Welcome by the Ministry for Economy, Science and Digitalisation
of Saxony–Anhalt
Horst Winkelmann |
| 09:50–10:10 | Introduction to MEMoRIAL: Medical Engineering and
Engineering Materials
Prof. Thorsten Halle |
| 10:10–10:30 | Introduction to ABINEP: Analysis, Imaging, and Modelling of
Neuronal and Inflammatory Processes
Prof. Volkmar Leßmann |

COFFEE BREAK I + PHOTO SESSION

Session 1 – ABINEP: Modules I and II

Chairs: Prof. Constanze Seidenbecher, Prof. Dirk Schlüter, Prof. Volkmar Leßmann, and Prof. Frank Ohl

- 11:00–11:05 Introduction to Module I –**
Neuroinflammation: Inflammatory Processes in Neurodegeneration
Prof. Constanze Seidenbecher and Prof. Dirk Schlüter
- 11:05–11:10 Sarah Schreier |** *Importance of the Astrocytes Activation in Neuropathological Situations Such as Stroke and Viral Infections*
- 11:10–11:15 Rituparna Bhattacharjee |** *Development of New Techniques for Visualisation of Neuroinflammatory Processes During Infections and Autoimmunity Diseases of the Brain*
- 11:15–11:20 Timothy French |** *Effect of Peripheric Inflammations on the Homeostasis of the Brain*
- 11:20–11:25 Carla Marcia Cangalara Lira |** *Cytoskeleton–Dependent Mechanisms of the Microglia–Matrix–Neuron–Interaction During Neuroinflammatory Processes*
- 11:25–11:30 Ayse Malci |** *Neuroplastin–Mediated Effects in the Nerve and Immunity System*
- 11:30–11:35 Introduction to Module II –**
Neurophysiology and Computational Modelling of Neuronal Networks
Prof. Frank Ohl
- 11:35–11:40 Babak Khodaie |** *Cellular Simulation of the Dopamine/BDNF–Dependent Modulation of the Synaptical Plasticity*
- 11:40–11:45 Vivkanandhan Viswanathan |** *Dopamine–Dependent Modulation of Neuronal Switches in the Auditory Cortex and the Striatum*
- 11:45–11:50 Ehsan Kakaei |** *Modelling of Dopamine–Induced Neuronal Network Activity – "Learning Conditional Associations: Rich Temporal Context and Involvement of Hippocampus / Medial Temporal Lobe"*
- 11:50–11:55 Babak Saber Marouf |** *Simulation of Behaviour–Dependent Network Activity and Dynamics on the Basis of In Vivo and In Vitro Recording*
- 11:55–12:00 Evangelia Pollali |** *Modulation of Behaviour–Related Oscillations by Interneuron Networks*

LUNCH BREAK

Session 2 – MEMORIAL: Modules I and II

Chairs: Prof. Oliver Speck and Prof. Holm Altenbach

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| 13:00–13:10 | Introduction to Module I (Medical Engineering) –
<i>Using Prior Knowledge in Medical Imaging</i>
Prof. Oliver Speck |
| 13:10–13:15 | Sebastian Bannasch <i>Model-Based Reconstruction Methods for CT Perfusion Imaging</i> |
| 13:15–13:20 | Domenico Iuso <i>Use of Prior Knowledge for Interventional C-Arm CT</i> |
| 13:20–13:25 | Daniel Hellge-Theune <i>Volume-of-Interest Imaging in C-Arm CT</i> |
| 13:25–13:30 | Samuel Manthey <i>Stent Detection and Enhancement</i> |
| 13:30–13:35 | Mario Breilkopf <i>Under-Sampled MRI for Percutaneous Intervention</i> |
| 13:35–13:40 | Chompunuch Sarasaen <i>Model-Based Reconstruction MRI</i> |
| 13:40–13:45 | Thomas Cerlach <i>RFA with MR-Coils</i> |
| 13:45–13:50 | Franziska Schulz <i>Augmented 4D Flow</i> |
| 13:50–14:00 | Introduction to Module II (Materials Science) –
<i>Materials Processing & Design Involving Microstructure Analysis Meets Mathematical Modelling and Simulation</i>
Prof. Holm Altenbach |
| 14:00–14:05 | Christopher Müller <i>Optimisation of Novel Vanadium-Based High Temperature Materials</i> |
| 14:05–14:10 | Mahdi Yadegari <i>Cooling Mechanisms and Microstructural Evolution</i> |
| 14:10–14:15 | Karsten Harnisch <i>In-situ SEM Methods to Improve Implant Materials</i> |
| 14:15–14:20 | Maria Crackau (p.p. Karsten Harnisch) <i>Evaluation of Force Contributions to the Damage Evolution and Failure Analysis of Metallic Arthroplasty Components</i> |
| 14:20–14:25 | Kathleen Dammler <i>Preparation and Characterisation of Ceramic Foams</i> |
| 14:25–14:30 | Moharam Haghi Chooabar <i>Analysis of Curved Photovoltaic Panels with a Novel Shell Theory and a Global-Local Approach</i> |
| 14:30–14:35 | Christian Künzel (p.p. Anke Ryll) <i>Preparation and Testing of Thermoelectric Materials</i> |
| 14:35–15:00 | Opportunity for Questions and Discussion |

COFFEE BREAK II

Session 3 – ABINEP: Modules III and IV

Chairs: Prof. Andreas Müller and Dr. Tino Zähle

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| 15:30–15:35 | Introduction to Module III –
<i>Immunosenescence: Infection and Immunity in the Context of Aging</i>
Prof. Andreas Müller |
| 15:35–15:40 | Lisa Osbelt <i>Influence of the Intestinal Microbiome on Infections, Course Disease and Success of Treatment on Cytostatic Drug-Treated Hemic-Oncological Patients</i> |
| 15:40–15:45 | Aneri Shah <i>Orchestration of Phagocytic Macrophage Activity to Clear Bacterial Infections by Cold Shock Proteins and NF-κB Signalling in Healthy and Immunosuppressed Elderly Patients</i> |
| 15:45–15:50 | Ann-Kathrin Meinshausen <i>Investigation of Biofilms During Septical Prosthesis Relaxation</i> |
| 15:50–15:55 | Alexander Pausder <i>Elucidating the Roles of Secretory Immunoglobulins in Asthma Under Homeostatic and Infectious Conditions</i> |
| 15:55–16:00 | Isabel Bernal <i>Characterisation of Innate Antibacterial T-cell Immunity to Understand Age-Associated Infections with C. difficile</i> |
| 16:05–16:10 | Introduction to Module IV –
<i>Human Brain Imaging for Diagnosing Neurocognitive Disorders</i>
Dr. Tino Zähle |
| 16:10–16:15 | Julia Rogge <i>Combination of MEG, EEG, and fMRT (Application: Diagnosis of Pathology of Decision-Making During Psychological Dysfunction)</i> |
| 16:15–16:20 | Stefan Repplinger <i>Deep Brain Technology (Application: Evaluation of Deep Brain Treatment)</i> |
| 16:45 | OPEN-END BARBECUE |