Maastricht Microscopy Meeting (M^3) on Advanced Optical Microscopy
Friday, June 15, 2018

Greepzaal, level 4, azM | Maastricht University Medical Center, P. Debyelaan 25, Maastricht

09.30 – 10.00	Arrival & Coffee
10.00 – 10.10	Welcome by Marc van Zandvoort Dept. of Molecular Cell Biology, Maastricht University Medical Center
10.10 – 10.55	Alard Roebroeck Dept. of Cognitive Neuroscience, MBIC, Faculty of Psychology & Neuroscience, Maastricht University *Imaging human cortex at the meso- and microscale using MRI and light sheet microscopy*
10.55 – 11.40	Laura van Huizen PhD Dept. of Biophotonics and Medical Imaging, VU Amsterdam *Assessment of fresh breast tissue using higher harmonic generation microscopy*
11.40 – 12.25	Victor Puelles Humboldt Research Fellow, UK Aachen *Optical clearing and advanced microscopy for the study of kidney health and disease*
12.30 – 13.45	Lunch
13.45 – 14.30	David Stegner Institute of Experimental Biomedicine – I, University Hospital of Würzburg, Germany *Peeking into the nursery of thrombocytes: Spatiotemporal analysis of the cell-vessel interplay in vivo, in vitro and in silico*
14.30 – 15.15	Ulf Schwarz Leica Microsystems BV *STED Microscopy – Tips & Tricks for Sample Preparation and Imaging*
15.15 – 16.00	Remco Megens Institute for Cardiovascular Prevention, Dept. of Medicine University Hospital, Ludwig-Maximilians-University Munich *Studying of cardiovascular disease using laser scanning microscopy*
16.00 - 16.45	Closure & Drinks

Participation is free, but please note that registration is obligatory. You can register by sending an e-mail, including your name and department, to the secretary of Molecular Cell Biology, Maastricht University Medical Center.
Email secr-mcb@maastrichtuniversity.nl Telephone +31-43-3881351

Dr. Alard Roebroeck
Dept. of Cognitive Neuroscience, MBIC,
Faculty of Psychology & Neuroscience, Maastricht University

Alard Roebroeck obtained his PhD in 2006 at Maastricht University focusing on the study of neuronal connections and communication in brain networks with Magnetic Resonance Imaging. He continued, first as a post-doc, then as assistant professor at the faculty of Psychology and Neuroscience with visiting research fellowships at the Brain Research Unit, Helsinki, Finland and Research Institute Juelich, Germany. He received the ERC Starting grant and NWO VIDI grant in 2014, and became an associate professor at the faculty of Psychology and Neuroscience, Maastricht University. There he heads the Computational Brain Connectivity lab where he leads investigates into how structural connectivity and functional interactions in human brain circuits support computation, cognition and perception.

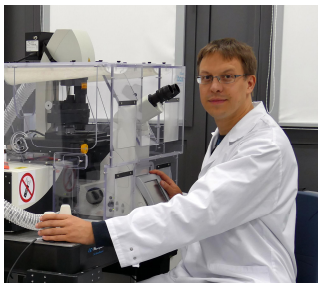
Laura van Huizen
PhD Dept. of Biophotonics and Medical Imaging VU Amsterdam

Laura van Huizen received her Master of Science in Physics (cum laude) in 2016 at the University of Amsterdam. Her master research was focused on using the optical technique higher harmonic generation microscopy for the assessment of fresh breast tissue, which will be the topic of her talk. Since May 2017 she is working for the startup company Tritos Diagnostics. This company wants to bring label free, real time, in vivo histology to the operation room to greatly accelerate current diagnostic protocols for tissue (minutes versus days) and provide instant feedback during surgical procedures with high accuracy. Laura was involved in building the first product, software development and research activities. In March 2018 she started her PhD research on validating the microscope by bringing the device into the hospital.

Victor Puelles
Humboldt Research Fellow, UK Aachen

Dr. Puelles received his medical degree (MD) at *Universidad Peruana Cayetano Heredia* (Lima, Peru) and his PhD at the *Department of Anatomy and Developmental Biology of Monash University* (Melbourne, Australia). In 2016, he joined the *Department of Nephrology at RWTH Aachen University Hospital* (Germany) funded by the *National Health and Medical Research Council of Australia* (NHMRC CJ Martin biomedical fellowship) and the *Humboldt Foundation*.
His PhD focused on the combination of stereological methods and confocal microscopy for the study human kidney pathophysiology. During his postdoctoral time, his work has focused on the development and application of new methods for the analysis of whole kidney filtering structures (glomeruli) in experimental models and human samples based on a combination of optical clearing and advanced light microscopy.

David Stegner
Institute of Experimental Biomedicine – I,
University Hospital of Würzburg, Germany



David Stegner studied Biochemistry at the University of Bayreuth. During his PhD in the laboratory of Bernhard Nieswandt at the Rudolf-Virchow Center, University of Würzburg, he investigated platelet signaling pathways and their contribution to arterial thrombosis and ischemic stroke. Intrigued by the limited understanding of the pathomechanisms underlying infarct progression in ischemic stroke, he joined the Department of Neurology, University Hospital Würzburg, after finishing his PhD in 2011. It quickly became apparent that visualizing the cellular interactions during infarct progression would be crucial for a deepened understanding of the processes underlying stroke. Therefore, David Stegner joined forces with Katrin Heinze, who heads the Bio-Imaging Center in Würzburg, to establish the imaging modalities to investigate cellular interactions during ischemic stroke. Their project achieved DFG-funding within the framework of the Collaborative Research Center (SFB 688) in 2014. In 2016 David Stegner was appointed research group leader for 'Vascular Imaging'. His laboratory studies thrombo-inflammatory processes and platelet biogenesis with the help of light-sheet fluorescence and two-photon microscopy.

Ulf Schwarz
Leica Microsystems CMS GmbH, Mannheim

After studying Biology at the University of Bayreuth I worked for 7 years as a Product Manager in the Health Care Industry.
In 2002 I joined the Application Team of Leica Microsystems CMS GmbH as a Global Application Specialist. In this role I organize and conduct system demonstrations, perform user trainings and run workshops, educating participants on all aspects of Confocal, Multiphoton and STED microscopy.

Remco Megens
Institute for Cardiovascular Prevention, Department of Medicine
University Hospital, Ludwig-Maximilians-University Munich

Remco Megens leads the IPEK core facility for advanced optical imaging (for internal and external collaborators) and his major research focus is the development and application of advanced microscopic methods and novel labeling strategies for atherosclerosis research. Advanced microscopic techniques are extensively used to study various aspects of atherosclerosis in various experimental models. Application of two-photon laser scanning microscopy (TPLSM) for our research has a strong emphasis on its utilization in large arteries and bone marrow. Novel TPLSM methods and labeling strategies have been developed that enable specific imaging of morphological and functional aspects of the target tissue in an *ex vivo* and *in vivo* layout. More recently, our group started working with stimulated emission depletion (STED) to study atherosclerosis at a nanoscopic level. Besides utilization of 3D STED (and its basic modality Confocal Laser Scanning Microscopy) for in vitro models we develop applications and staining strategies for multicolor 3D STED in tissues and models specific for the field of cardiovascular research.