Maastricht Microscopy Meeting (M^3) on Advanced Optical Microscopy
Friday, June 16, 2017

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

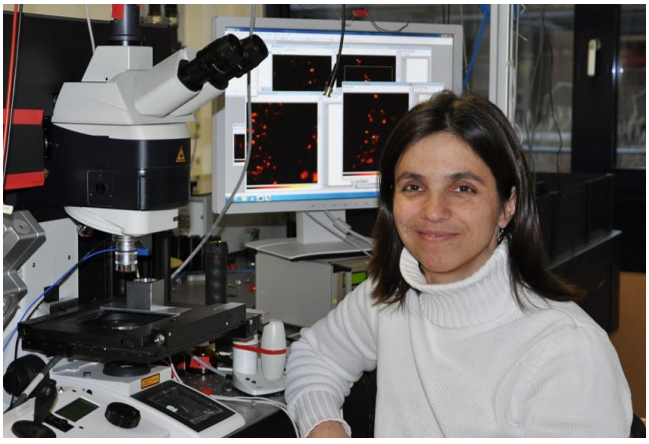
09.30 – 10.00	Arrival & Coffee
10.00 – 10.10	Welcome by Marc van Zandvoort Dept. of Molecular Cell Biology, Maastricht University Medical Center
10.10 – 10.55	Christian Tischer Advanced Light Microscopy Facility, EMBL Heidelberg *High-throughput and adaptive feedback microscopy*
10.55 – 11.40	Katrin Willig Nanoscale Microscopy and Molecular Physiology of the Brain, Max-Planck-Institut für Experimentelle Medizin, Göttingen *STED microscopy of the living mouse brain*
11.40 – 12.25	Minh Huynh Australian Centre for Microscopy & Microanalysis, Sydney *Combining Wide-Field Super-Resolution Microscopy and Electron Tomography: Rendering Nanoscopic Correlative Arrays on Subcellular Architecture*
12.30 – 13.45	Lunch
13.45 – 14.30	Laila Ritsma Dept. of Molecular Cell Biology –LUMC, Leiden *Spying on single cells in vivo using intravital microscopy and imaging windows*
14.30 – 15.15	Jerker Widengren Dept. of Applied Physics, KTH- Royal Institute of Technology, Stockholm *Ultrasensitive and ultrahigh resolution fluorescence spectroscopy and imaging – fundamental biomolecular studies and towards clinical diagnostics*
15.15 – 16.00	Judith Klumperman Dept. of Cell Biology, UMC Utrecht *Correlative Light Electron Microscopy (CLEM) of endosomes, lysosomes and autolysosomes*
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. Christian Tischer
Advanced Light Microscopy Facility, EMBL Heidelberg

After studying physics in Heidelberg, I did a PhD with Philippe Bastiaens at EMBL Heidelberg, working on microscope development and signalling in mammalian cells. My postdoc was with Marileen Dogterom at the AMOLF institute in the Netherlands, working on microtubule dynamics in fission yeast. Since 2009 I have been working with Rainer Pepperkok in the Advanced Light Microscopy Facility of EMBL Heidelberg where I help our users with both microscopy and image analysis. In particular, I am responsible for the analysis of high-throughput microscopy data. As of 2013 I am an active member of the European BioImage Analysis community (http://eubias.org/NEUBIAS/).

Dr. Katrin Willig
Max Planck Institute Experimental Medicine, Göttingen



Katrin Willig studied Physics at Würzburg University before joining Stefan W. Hell's research team at the Max Planck Institute for Biophysical Chemistry in Göttingen. She graduated with a PhD in 2006 with a thesis on STED microscopy. Since 2014 she has been leading her own research team at the Göttingen Cluster of Excellence and DFG Research Center for Nanoscale Microscopy and Molecular Physiology of the Brain (CNMPB) at the Max Planck Institute of Experimental Medicine in Göttingen. She pioneered the use of fluorescent proteins for the nanoscale imaging of living cells and has developed STED microscopy for imaging tissue inside living organs, known as Deep Tissue Imaging. Her special area of interest is the processes in the contact points between the nerve cells that are known as the synapses. She has demonstrated the strength of these technologies by in vivo-imaging inside a living mouse brain where she studies tiny protrusions (dendritic spines) on the nerve cell dendrites which change their morphology over time, which is believed to be the basis of memory in the brain.

Dr. Minh Huynh

Australian Centre for Microscopy & Microanalysis, The University of Sydney

Minh completed her Honours and PhD at the Department of Oral Pathology, University of Sydney under the supervision of Professor Hans Zoellner. She investigated ultra-structural changes of endothelium during apoptosis and mechanisms for tumour invasion and metastasis in a co-culture model using a range of imaging techniques. Following her PhD studies, she worked as a Postdoctoral Researcher for the Iron Metabolism and Chelation Program at the University of Sydney investigating intracellular trafficking of endosomes and mitochondria in iron overload disorders.

In her current role at the Australian Centre of Microscopy & Microanalysis (ACMM), she provides technical support and training for research students and staff in a wide range of microscopy techniques including light and electron microscopy, specialising in serial block face scanning electron microscopy (SBF SEM), super resolution microscopy (GSD and STED) and correlation microscopy.

Dr. Laila Ritsma

Dept. of Molecular Cell Biology –LUMC, Leiden

Laila Ritsma is currently running a team at the Leiden University Medical Center (LUMC) that studies tumor metastasis and dormancy using high-resolution two-photon intravital microscopy. During her undergraduate work at Universiteit Utrecht she developed an interest in cancer research and advanced microscopy techniques. This led her to perform her graduate work in the lab of Jacco van Rheenen at the Hubrecht Institute (Utrecht, the Netherlands), who used an advanced in vivo imaging technique to study cancer biology. During her PhD she developed and optimized high-resolution intravital imaging to study the metastatic process at the cellular level in living animals. She developed several new imaging technologies such as the Abdominal Imaging Window for long-term intravital microscopy, and a method to re-identify intravitally imaged areas in cyrosections termed CLIM. Her work has uncovered a highly migratory stage during liver metastasis colonization and has provided new insights into intestinal stem cell homeostasis. After obtaining her PhD in 2013, Laila pursued a postdoctoral fellowship within the research laboratory of Sridhar Ramaswamy (Harvard Medical School, Massachusetts General

Hospital, Boston, MA, USA) studying cancer dormancy. Early 2016 she came back to the Netherlands to start her work in Leiden.

Prof. Jerker Widengren
Experimental Biomolecular Physics, Kungliga Tekniska Högskolan, Stockholm

Prof. Jerker Widengen belongs to the pioneers in the field of fluorescence-based single-molecule spectroscopy and Fluorescence Correlation Spectroscopy (FCS). The focus of his research group at KTH is to develop ultrasensitive and ultrahigh resolution fluorescence spectroscopy and imaging techniques for detection, identification and characterization of biomolecules. Apart from method development, his group has applied these techniques for extensive studies of photo-dynamics of organic fluorophores and fluorescent proteins, to optimize the sensitivity in single molecule studies, as a means for super-resolution fluorescence imaging and for micro-environmental imaging in e.g. live cells. His group has also applied their ultrasensitive and ultrahigh resolution fluorescence methods for fundamental bio-molecular studies, providing new perspectives on proton exchange and bio-molecular interactions in bio-membranes, and for sub- cellular cancer diagnostic purposes in close collaboration with clinical partners.

Prof. Judith Klumperman
Dept. of Cell Biology, UMC Utrecht

Judith Klumperman is cell biologist and expert in the application of electron microscopy (EM) to biomedical research questions. Her lab is internationally renowned for the use of immunoEM. Recently she introduced several correlative light electron microscopy (CLEM) protocols that literally bridge the gap between light or live cell microscopy and EM. In 2015 her lab was ratified as Dutch Flagship Node for CLEM within the European ESFRI initiative Euro-BioImaging. Her research aims to understand how genetic mutations lead to cellular disorganization and disease, with focus on the Autophagy-Endo-Lysosomal pathway. Her studies have contributed to the functional characterization of trafficking machinery proteins (SNAREs, Rab proteins, tethers and coat complexes) and the mannose-6-phospate receptor (MPR) pathway for lysosomal enzyme delivery. She identified clathrin-coats on endosomes as the structural domains for ESCRT dependent sorting of growth factor receptors for down-regulation in lysosomes and found that the Hermansky-Pudlak Syndrome (HPS)-associated adaptor protein AP3 is specifically required for transport of lysosomal membrane proteins from

recycling endosomes to lysosomes. Her most recent finding is a VPS41-dependent pathway for delivery of lysosomal membrane proteins from the Golgi complex directly to lysosomes. This changes the traditional paradigm that all newly synthesized lysosomal proteins are transported via the same type of carriers as the MPR. Her current research focuses on the role of tethering proteins (CORVET/HOPS) in endosomal transport, autophagy and lysosome biogenesis.

Master's
University/College of Higher Education: MSc Biology, Leiden University, The Netherlands
Date (dd/mm/yy):April 23, 1985
Main subject:Cell and Molecular Biology
Date (dd/mm/yy): August 3, 1984

Doctorate
University/College of Higher Education: PhD Medicine, Leiden University, The Netherlands
Date (dd/mm/yy): May 30, 1990
Supervisor ('Promotor'):Profs.W.ThDaems (Leiden University) and J.A.M. Tager (Amsterdam University)