



Maastricht Microscopy Meeting (M³) on Advanced Optical Microscopy
Friday, June 21, 2019

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	Davide Gambarotto Dept. of Cell Biology, University of Geneva <i>Imaging cellular ultrastructures using expansion microscopy (UltraExM)</i>
10.55 - 11.40	David Unnersjö-Jess Dept. of Cell Physics, Royal Institute of Technology (KTH), Stockholm <i>Studying Kidney Pathology using STED Microscopy and Optical Clearing</i>
11.40 - 12.25	Karsten Koenig Dept. of Biophotonics & Laser Technology, Saarland University <i>Clinical Multiphoton / CARS tomography</i>
12.30 - 13.45	Lunch
13.45 - 14.30	Valentin Nägerl Synaptic Plasticity and Super-Resolution Microscopy Group, Université de Bordeaux <i>Super-resolution microscopy for neuroscience: principles & applications</i>
14.30 - 15.15	Dimitris Kapsokalyvas Dept. of Molecular Cell Biology, Maastricht University / Institute for Molecular Cardiovascular Research (IMCAR), RWTH Aachen <i>Fluorescence Multiview Imaging</i>
15.15 - 16.00	Saskia Ellenbroek Dept. of Molecular Pathology, Netherlands Cancer Institute <i>Imaging (cancer) stem cell dynamics in living mice</i>
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. Davide Gambarotto
Dept. of Cell Biology,
University of Geneva



After my bachelor's degree in molecular biology at the University of Bologna (Italy), I had the chance to participate to a project that led me to obtain both a Master in Functional Genomics at the University of Trieste (Italy) and a Master in Genetics at the University of Paris Diderot (France). During my master studies I spent six months at the Institute Jacques Monod (Paris) to study the spontaneous global resistance to antifolates in the vestigial mutant of *Drosophila melanogaster*. After a short experience at the Ramazzini Institute (Bologna, Italy), I joined the lab of Renata Basto, at the Curie Institute in Paris, where I obtained my PhD investigating the role of extra centrosomes in tumor initiation and, regulation and roles of Plk4, the master regulator of centrosome biogenesis, in *Drosophila* neural stem cells. This last experience made me very passionate about centrosome and in particular about the architecture of their core structure, the centriole. Thus, I decided to join the lab of Paul Guichard and Virginie Hamel, as a postdoctoral fellow. Since May 2017 I have been working on the applicability of a recent microscopy technique, called expansion microscopy, on centrioles.

David Unnersjö-Jess
PhD Dept. of Cell Physics, Royal Institute of Technology,
Stockholm



David Unnersjö-Jess is currently a PhD student in the group of cell physics at the Royal Institute of Technology (KTH) in Stockholm, Sweden. Before starting his PhD, David studied a bachelor's and a master's in engineering physics at KTH where his master thesis was focused on applying optical clearing techniques to kidney tissue. In his current research he has continued exploring the use of optical clearing as a sample preparation technique for super-resolution STED microscopy. In his talk he will focus mostly on the application of STED microscopy in combination with optical clearing for studying nanoscale pathology in the kidney.

Karsten Koenig
Dept. of Biophotonics and Laser Technologies
Saarland University



Karsten Koenig is C4 Full Professor and Head of the Department of Biophotonics and Laser Technologies at the Saarland University, Germany (www.bl.t.uni-saarland.de). He gained the PhD degree in physics as well as the habilitation degree in cell biology from the University Jena. Prof. König published about 500 scientific papers (2x Nature) in the field of biophotonics and laser material processing, filed 25 patents, and pioneered fluorescence lifetime imaging, femtosecond laser nanoprocessing, femtosecond laser transfection, and clinical multiphoton tomography. His work was awarded with the SPIE Prism Award, the Leibinger Innovation Award, the Pascal Rol Award, the Award of the International Society of Skin Pharmacology and Physiology, the Technology for the Human Being Award of the Fraunhofer Society, the Kortum Motivation Prize, the Feulgen Prize, The New Economy Award, and the IAIR Award as European Man of the Year 2014. In 2015 he became a fellow of the International Society SPIE. Karsten König focuses on biomedical and technical applications of femtosecond laser technology. His current projects include Sub-100nm-Nanomachining with 10 Femtosecond Laser Pulses, Optical Reprogramming by laser transfection, Testing the biosafety of nanoparticles in cosmetic products, and Multiphoton Tomography of astronauts to understand skin ageing effects in space.

Valentin Nägerl
Synaptic Plasticity and Super-Resolution Microscopy Group,
Université de Bordeaux



Dr. U. Valentin Nägerl is a full professor of neuroscience and bio-imaging at the University of Bordeaux, where he directs the master's program in cellular bio- imaging and heads a research team focusing on the structural mechanisms of synaptic plasticity by applying novel in vivo super-resolution microscopy approaches.

He studied physics as an undergraduate student in Göttingen and obtained his PhD in neuroscience with Istvan Mody at UCLA. Dr. Nägerl worked as a postdoc and group leader with Tobias Bonhoeffer at the Max Planck Institute of Neurobiology in Martinsried/Munich, obtained his habilitation in neuroscience under Arthur Konnerth at the Technical University of Munich and worked with the Nobel laureate Stefan W. Hell at the Max Planck Institute for Biophysical Chemistry.

Dr. Nägerl is well-known for his work on STED microscopy and synaptic plasticity, and is frequently invited to speak at and organize international scientific conferences and symposia. He has been in charge of several collaborative research projects (ANR, ERA-net, HFSP), received the prestigious 'Equipe FRM' award in 2016, became a member of the 'Institut Universitaire de France' in 2017 and won the 'Great Advances in Biology' prize from the French Academy of Sciences in 2018.

Dimitris Kapsokalyvas
Dept. of Genetics & Cell Biology, Maastricht University,
The Netherlands
Institute for Molecular Cardiovascular Research (IMCAR),
RWTH Aachen University, Germany



Dimitris Kapsokalyvas obtained his BSc in Physics and MSc in Optoelectronics from the University of Crete, Greece. He acquired his PhD degree at the European Laboratory for Nonlinear Spectroscopy, Florence, Italy, where he developed specialized imaging instrumentation for in vivo imaging of human skin (Multispectral Dermoscope and two-photon microscope). He is currently splitting his time between Maastricht University and RWTH Aachen University, where he is developing imaging strategies for Multiview Imaging of tissue samples and small organisms. His scientific interest is in developing novel methods for imaging biological samples and implementing quantification algorithms. Some of his research include imaging of ear implants, FRET biosensors, hydrolyzed biomass, skin, and zebrafish embryos.

Saskia Ellenbroek

Senior postdoctoral fellow, Dept. of Molecular Pathology,
The Netherlands Cancer Institute, Amsterdam



Saskia Ellenbroek has obtained her PhD at the University of Amsterdam, based on the research performed in the group of Dr. John Collard at the department of Cell Biology at the Netherlands Cancer Institute. During her PhD training she studied the function of Rho-GTPases and their regulators in polarization processes and cancer. As a postdoc in the group of Prof. Jacco van Rheenen at the Cancer Biophysics department of the Hubrecht Institute in Utrecht she used intravital microscopy and genetic models to study stem cell competition in the small intestine for which she received a VENI grant. Currently, she continues her research at the Netherlands Cancer Institute, using these unique and powerful techniques, focusing on intestinal stem cell competition and crypt dynamics during homeostasis and tumor initiation. .