

**Programme PhD / Postdoc course
Advanced Optical Microscopy
2024**

Monday, June 3, 2024

Time	Item	Location
09.00 – 09.15	<i>Welcome and brief overview of the course</i> Marc van Zandvoort Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.111A
09.15 – 10.15	<i>Basics of Microscopy</i> Marc van Zandvoort Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.111A
10.15 – 10.45	<i>Break</i>	
10.45 – 13.00	<i>Practical course 1: Bright field microscopy, a hands-on course</i> Jos Broers / Dimitris Kapsokalyvas Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 40 C4.556
13.00 – 14.00	<i>Break</i>	
14.00 – 15.00	<i>Fluorescence Microscopy</i> Marc van Zandvoort Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.111A
15.00 - 15.15	<i>Break</i>	
15.15 – 16.15	<i>Practical course 2: Fluorescence Microscopy a hands-on course</i> Group 1a and 1b Monique Ummelen and Ziyu Xu Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.126A F5.150a
15.15 – 16.15	<i>Group 2 working on assignment</i>	UNS 50 F5.111A
16.15 – 17.15	<i>Practical course 2: Fluorescence Microscopy a hands-on course</i> Group 2a and 2b Ziyu Xu and Merel Stiekema Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.126A F5.150a
16.15 – 17.15	<i>Group 1 working on assignment</i>	UNS 50 F5.111A

Tuesday, June 4, 2024

Time	Item	Location
09.00 – 10.00	<i>Confocal Microscopy</i> Dimitris Kapsokalyvas Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.111A
10.00-11.00	<i>From sample to image: a starting guide to sample preparation and staining</i> Timo Rademakers MERLN, Maastricht University Medical Center	UNS 50 F5.111A
11.00-11.15	<i>Break</i>	
11.15 – 12.15	<i>An introduction to tissue clearing for 3D microscopy</i> Sven Hildebrand Faculty of Psychology, Maastricht University Medical Center	UNS 50 F5.111A
12.15 – 13.15	<i>Break</i>	
13.15 – 14.15	Light Sheet Microscopy Anna Schüth Faculty of Psychology, Maastricht University Medical Center	UNS 50 F5.111A
14.30 – 15.30	<i>Practical course 3: Confocal Microscopy Demonstration</i> Group 1a and 1b Merel Stiekema, Ziyu Xu Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.150a G0.207
14.30 – 15.30	<i>Group 2 working on assignment</i>	UNS 50 F5.111A
16.00 – 17.00	<i>Practical course 3: Confocal Microscopy Demonstration</i> Group 2a and 2b Merel Stiekema, Ziyu Xu Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.150a G0.207
16.00 – 17.00	<i>Group 1 working on assignment</i>	UNS 50 F5.111A

Wednesday, June 5, 2024

Time	Item	Location
09.00 – 10.00	<i>Super-resolution Microscopy techniques: an overview</i> Dimitris Kapsokalyvas Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.111A
10.00 – 11.00	<i>STED-Microscopy</i> Marc van Zandvoort Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.111A
11.00 – 11.15	Break	
11.15 – 12.15	<i>Expansion Microscopy, Super-resolution based on sample preparation: principles, sample preparation, and results</i> Merel Stiekema Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.111A
12.15 – 13.00	Break	
13.00 – 14.00	<i>Two-photon microscopy: going deep and life</i> Marc van Zandvoort Department of Genetics and Cell Biology	UNS 50 F5.111A
14.00 – 16.00	Practical course 5: STED microscopy demonstration Group 1a and 1b Merel Stiekema (both groups 60 minutes, subsequently) Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 G0.207
14.00 – 16.00	<i>Practical course 6: Two-Photon Hands-on</i> Group 2a and 2b Dimitris Kaspokalyvas (both groups 60 minutes, subsequently) Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 G0.201
16.00 – 18.00	Practical course 5: STED microscopy demonstration Group 2a and 2b Merel Stiekema (both groups 60 minutes, subsequently) Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 G0.207
16.00 – 18.00	<i>Practical course 6 : Two-Photon Hands-on</i> Group 1a and 1b Dimitris Kapsokalyvas (both groups 60 minutes, subsequently) Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 G0.201

Thursday, June 6, 2024

Time	Item	Location
09.00-10.00	<i>Multiphoton Endoscopy</i> Vytautas Kucikas IMCAR Aachen	UNS 50 F5.111A
10.00 – 11.00	<i>High throughput and high content cellular analysis for systems biology</i> Winnok De Vos Antwerp University	UNS 50 F5.111A
11.00-12.00	<i>Break</i>	
12.00 – 13.00	<i>3D image restoration and imaging pitfalls</i> Vincent Schoonderwoert Scientific Volume Imaging BV Meeting ID: 928 7422 1816 Password: 610076	UNS 50 F5.111A Zoom: Link to be added
13.00-13.30	<i>Break</i>	
13.30 – 14.30	<i>Workshop Image deconvolution with Huygens</i> Vincent Schoonderwoert Scientific Volume Imaging BV Meeting ID: 928 7422 1816 Password: 610076	UNS 50 F5.111A Zoom: Link to be added
14.30-16.00	<i>Image Processing hands-on</i> Dimitris Kapsokalyvas Department of Genetics and Cell Biology	UNS 50 F5.111A

Friday, June 7, 2024

Time	Item	Location
10.00 – 11.00	<i>Applications of STED</i> <i>Marcel Lauterbach</i> <i>University of Homburg</i>	UNS 50 F5.111A
11.00 – 12.00	<i>Spontaneous Raman microscopy techniques</i> Giuditta Perversi Chemistry, Maastricht Science Program	UNS 50 F5.111A
12.00 – 13.00	<i>Break</i>	
13.00 – 14.00	<i>Stimulated Raman Microscopy, CARS, and virtual histology</i> <i>Hervé Rigneault</i> <i>CNRS Marseille</i>	UNS50 F5.111A
14.00 – 15.00	exSRRF: Improving resolution without technical adaptations Dominik Kylies Department of Medicine - Nephrology, Rheumatology, Endocrinology, Diabetology, Transplantation and Translational Immunology	UNS 50 F5.111A Zoom: Link to be added
15.00 – 15.15	<i>Wrap-up</i> Marc van Zandvoort Dept. Molecular Cell Biology, Maastricht University Medical Center	UNS 50 F5.111A
15.15 – 17.15	<i>Groups working on assignment</i>	UNS 50 F5.111A