

EuroCellNet COST action (CA 15214), an Integrative Action for Multidisciplinary Studies on Cellular Structural Networks

featuring

Training School on Multimodal Optical Imaging Methods of visualisation and reconstruction of Cellular Structural Networks

Trnava, 09-11 September 2019
(held at UCM, nam. J Herdu, Trnava)

Speakers:

Ales Benda, BIOCEV Czech Republic

Riccardo Cicchi, University of Pisa, Italy

Dusan Chorvat, ILC Bratislava

Beata Cunderlikova, Medical Faculty UK and ILC Bratislava

Maria Farsari, FORTH, Greece

Jozef Gotzmann, Medical University Vienna, Austria

Peter Horvath, Institute of Biochemistry, Hungarian Academy of Sciences, BRC, Szeged, Hungary

Philipp Kukura, University of Oxford, United Kingdom

Alzbeta Marcek Chorvatova, ILC Bratislava and UCM Trnava

Anton Mateasik, ILC Bratislava

Marina Shrimanova, *Inst. Of Biomedical Technologies, Nizhny Novgorod, Russia*

Ramunas Valiokas, Baltfab, Lithuania

Alexandra Zahradnikova, Jr, Biomedical Center SAS, Bratislava

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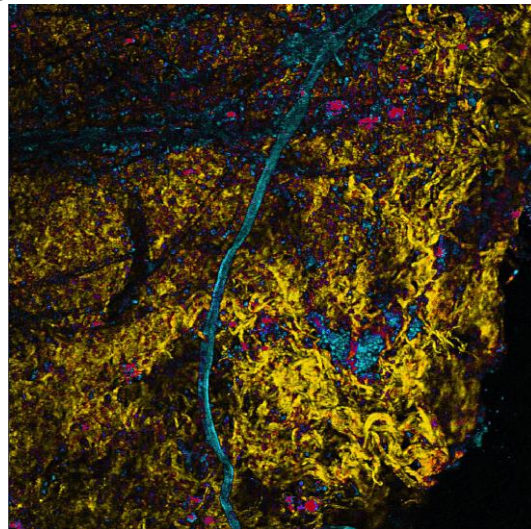


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Training School on Multimodal Optical Imaging

Day 1, September 9	
8:00 – 9:00	Registration (UCM)
9:00 – 9:10	Workshop Opening Representative of the dean of Faculty of Natural Sciences, UCM Trnava
9:10 – 9:20	Europe overview - concepts and working modes, COST opportunities Klara Weipoltshammer , Medical University Vienna, Austria
Block I.	INTRODUCTION TO SPECTROSCOPY AND IMAGING
9:20 – 9:40	Introduction to Multimodal Optical Imaging Alzbeta Marcek Chorvatova , ILC Bratislava and UCM Trnava
9:40 – 10:10	Advanced Multimodal Optical Imaging Techniques Dusan Chorvat , ILC Bratislava
10:10 – 11:10	PLENARY – Weighting single molecules with light Philipp Kukura , University of Oxford, UK
<i>11:10 – 11:30</i>	<i>Coffee break</i>
Block II.	ANALYSIS OF COMPLEX DATA
11:30 – 12:30	PLENARY – Life beyond the pixels: image analysis and machine learning methods for cell profiling. Peter Horvath , Institute of Biochemistry, Hungarian Academy of Sciences, BRC, Szeged, Hungary
<i>12:30 – 13:30</i>	<i>Lunch</i>
13:30 – 14:00	Complex microscopy data analysis Anton Mateasik , ILC Bratislava
Technical Block I	HANDS ON USER TRAINING
14:00 – 14:15	TECHNICAL PROGRAM - company presentations : Carl Zeiss, Jena
14:15 – 14:30	TECHNICAL PROGRAM - company presentations : Becker&Hickl, Germany
<i>14:30 – 16.00</i>	<i>Coffee available</i>
14:30 – 17:30	Hands-on user training, 5 stands: <ol style="list-style-type: none"> 1. Zeiss: Advanced confocal microscopy imaging, 2. Becker&Hickl: Time-resolved macroimaging and spectroscopy, 3. Kvant: Light spectrometry, 4. SiProgs: 3D model creation, visualization and fabrication 5. Academic writing : research study protocol preparation, academic writing skills

	MEETING OF WG3COST
16:00 – 17:00	Meeting of WG3 COST
Parallel Session I	GROUNDBREAKING INVENTIONS IN OPTICAL IMAGING
17:30 – 18:30	Groundbreaking inventions in multimodal optical imaging: inventions receiving Nobel prizes in 20th and 21st century. Selected speakers
19:00 – 22:00	<i>Conference Dinner (at UCM)</i>

Training School on Multimodal Optical Imaging

Day 2, September 10	
Block III	MULTIMODAL OPTICAL IMAGING
9:00 – 9:30	ECM visualization by LSCM and SEM Ales Benda, BIOCEV Czech Republic
9:30 – 10:00	Fast imaging and photomanipulation with spinning disk Jozef Gotzmann, Medical University Vienna, Austria
10:00 – 10:30	Time-resolved imaging using FLIM Marina Shrimanova, Inst. Of Biomedical Technologies, Nizhny Novgorod, Russia
10:30 – 11:00	Imaging cellular structural networks with superresolution microscopy Alexandra Zahradnikova, Jr, Biomedical Center SAS, Bratislava
11:00 – 11:20	<i>Coffee break</i>
11:20 – 12:20	PLENARY – Challenges of imaging collagen organization and metabolism using SHG and multiphoton fluorescence microscopy. Riccardo Cicchi, University of Pisa, Italy
12:20 – 13:30	<i>Lunch</i>
13:30 – 14:00	Imaging 3D cell cultures Beata Cunderlikova, Medical Faculty UK and ILC Bratislava
Technical Block II	HANDS ON USER TRAINING
14:30 – 16:00	<i>Coffee available</i>
14:00 – 14:15	TECHNICAL PROGRAM - company presentations : Kvant, s.r.o.
14:15 – 14:30	TECHNICAL PROGRAM - company presentations : SiProgs
14:30 – 17:30	Hands-on user training, 5 stands: <ol style="list-style-type: none"> 1. Zeiss: Advanced confocal microscopy imaging, 2. Becker&Hickl: Time-resolved macroimaging and spectroscopy, 3. Kvant: Light spectrometry, 4. SiProgs: 3D model creation, visualization and fabrication 5. Academic writing : research study protocol preparation, academic writing skills
Parallel Session II	CAREERS IN MULTI-MODAL OPTICAL IMAGING
17:30 – 18:30	Careers in multimodal optical imaging: EU opportunities, EU Infrastructures, CSMS, SPIE, etc. Round table with speakers
19:00 – 22:00	<i>Visit of Trnava</i>

Training School on Multimodal Optical Imaging

Day 3, September 11	
Block IV.	3D PRINTING AT MACRO AND MICRO-SCALE LEVELS
9:00 – 10:00	PLENARY I - Crosslinked ECM-mimetic hydrogels as a platform for tissue microengineering Ramunas Valiokas , Baltfab, Lithuania
10:00 – 11:00	PLENARY II - 3D printing via Multiphoton Lithography Maria Farsari , FORTH, Greece
<i>11:00 – 11.20</i>	<i>Coffee break</i>
11:20 – 12:20	RECAPITULATION - Methods of visualization and reconstruction of cellular structural networks Selected speakers
<i>12:20 – 13:30</i>	<i>Lunch</i>
Technical Block III	HANDS ON USER TRAINING
13:30 – 15:30	Hands-on user training, 5 stands: <ol style="list-style-type: none"> 1. <i>Zeiss</i>: Advanced confocal microscopy imaging, 2. <i>Becker&Hickl</i>: Time-resolved macroimaging and spectroscopy, 3. <i>Kvant</i>: Light spectrometry, 4. <i>SiProgs</i>: 3D model creation, visualization and fabrication 5. <i>Academic writing</i> : research study protocol preparation, academic writing skills
<i>15:30 – 16.30</i>	<i>Coffee available</i>
Parallel Session III	PANEL DISCUSSION
15:30 – 16:30	Panel discussion: future of multimodal optical imaging
16:30 - 16:45	<i>Distribution of Certificates of Attendance</i> Training school summary and closing remarks
<i>17h00</i>	<i>End of training School</i>