

# FENS-IBRO Imaging Training Center 2012

**Week 1 at the EPFL, BMI - room AI 1153**

**27-31 August 2012**

	Monday 27	Tuesday 28	Wednesday 29	Thursday 30	Friday 31
<b>09:00</b>	Introduction + Spring	Griesbeck	Knott	Choquet	Emiliani
<b>10:30</b>	Coffee	Coffee	Coffee	Coffee	Coffee
<b>11:00</b>	Helmchen	Students' talks	Genoud	Chatton	Nagerl
<b>12:30</b>	Lunch	Lunch	Lunch	Lunch	Lunch
<b>13:00</b>	Lab work	Lab work	Lab work	Lab work	Lab work
<b>18:30</b>	Dinner	Dinner	Dinner	Dinner	16:00-17:30
<b>19:30</b>	Students' talks	Spring		CARE talk, Treue	Lab work presentations

Name	Institution	Topic of lecture
Kenneth Spring	USA	Fluorescence Microscopy – Widefield and Confocal
Fritjof Helmchen	Zurich, Switzerland	Two-photon microscopy: Principles and in vivo application to the mouse brain
Oliver Griesbeck	Munich, Germany	Genetically Encoded Calcium Indicators
Kenneth Spring	USA	Electronic Imaging and Detection of Light
Graham Knott	EPFL, Lausanne, Switzerland	Imaging synapses with electron microscopy
Christel Genoud	FMI, Basel, Switzerland	Microtome-SBFSEM for large-scale 3D Electron microscopy
Daniel Choquet	Bordeaux, France	Superresolution nanoscale imaging of excitatory synapses
Jean-Yves Chatton	Lausanne, Switzerland	Imaging intracellular monovalent ions
Stefan Treue	Göttingen, Germany	Ethical, legal and scientific aspects of basic neuroscience research on animals
Valentina Emiliani	Paris, France	Two-photon optogenetics by wave front shaping of ultrafast pulses
Valentin Nagerl	Bordeaux, France	STED imaging in brain slices

# FENS-IBRO Imaging Training Center 2012

**Week 2 at the Univ. Lausanne, DFN - Petit Auditoire**

**3-7 September 2012**

	Monday 3	Tuesday 4	Wednesday 5	Thursday 6	Friday 7
<b>09:00</b>	Nicolas Olivier	Ralf Schneggenburger	Thomas Nevian	Karen Zito	LNAM'12 Les Diablerets
<b>10:30</b>	Coffee	Coffee	Coffee	Coffee	
<b>11:00</b>	Leopoldo Petreanu	Andrea Volterra	Dmitriy Shcherbo	Thomas Oertner	
<b>12:30</b>	Lunch	Lunch	Lunch	Lunch	
<b>13:00</b>	Lab work	Lab work	Lab work	Lab work	
<b>18:30</b>	Dinner	Dinner	Dinner	17:30 – 19:00	
<b>19:30</b>		19:30 - Mark Schnitzer		Lab work presentations	

Name	Institution	Topic of lecture
Nicolas Olivier	EPFL, Lausanne	Superresolution microscopy (PALM and STORM)
Leopoldo Petreanu	Champalimaud Centre for the Unknown, Lisbon	Optogenetics technology and application for circuit mapping
Ralf Schneggenburger	EPFL, Lausanne	Fluorescent Ca <sup>2+</sup> indicators and quantitative Ca <sup>2+</sup> imaging Ca <sup>2+</sup> uncaging
Andrea Volterra	DFN, University of Lausanne	Astrocyte Ca <sup>2+</sup> microdomains: local detection and modulation of synaptic activity
Mark J. Schnitzer	Stanford University, CA, USA	Imaging neural calcium dynamics in freely behaving mice using the integrated fluorescence microscope
Thomas Nevian	Dept. Physiology, Univ. of Bern	Ca <sup>2+</sup> -imaging in neurons and glia
Dmitriy Shcherbo	Russian Academy of Sciences, Moscow, Russia	Novel fluorescent protein-based tools
Karen Zito	Univ. California Davis, USA	Probing synapse development and plasticity with two-photon glutamate uncaging
Thomas Oertner	Hamburg, Germany	Using optogenetic technology to investigate synaptic function

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# Week 3 at the UNIGE, CMU – Rooms D60 and 7001

10-14 September 2012

	Monday 10	Tuesday 11	Wednesday 12	Thursday 13	Friday 14
	<b>Room D60</b>	<b>Room 7001</b>			
<b>09:00</b>	Ania Majewska	Alan Carleton	Balázs Rózsa	Mark Hübener	Lab work
<b>10:30</b>	Coffee	Coffee	Coffee	Coffee	Coffee
<b>11:00</b>	Hamutal Slovin	Daniel Huber	Olga Garaschuk	Anthony Holtmaat	Lab work
<b>12:30</b>	Lunch	Lunch	Lunch	Lunch	Lunch
<b>13:00</b>	Lab work	Lab work	Lab work	Lab work	Lab work
				18:00 - Round table Science Communication	17:00 – 18:30 Lab work presentations
					19:00 - Farewell Dinner

Last Name	Institution	Topic of lecture
Ania Majewska	Univ. of Rochester, NY, USA	Imaging of glia <i>in vivo</i>
Hamutal Slovin	Gonda Brain Research Center, Bar-Ilan Univ., Ramat-Gan Israel	Visual processing and perceptual correlates as revealed by voltage-sensitive dye imaging in the visual cortex of behaving monkeys
Alan Carleton	CMU, University of Geneva	Intrinsic optical signal imaging
Daniel Huber	CMU, University of Geneva	Chronic two-photon imaging in behaving mice
Balázs Rózsa	Inst. of Experimental Medicine, Budapest, Hungary	Roller coaster scanning
Olga Garaschuk	Center for Integrative Neuroscience, University of Tübingen, Germany	<i>In vivo</i> calcium imaging of cortical microcircuits
Mark Hübener	Max Planck Inst. Of Neurobiology, Martinsried, Germany	Imaging of neuronal function in awake animals
Anthony Holtmaat	CMU, University of Geneva	Imaging of structural plasticity in the mouse cerebral cortex