

# Schedule - 1<sup>st</sup> BIGS Neuroscience summer school (May 15 - 24, 2017)

	Day 1 (15/05) <b>Molecular biology and genetics</b>	Day 2 (16/05) <b>Cellular and developmental neuroscience</b>	Day 3 (17/05) <b>Disease and regeneration, Stem cells</b>	Day 4 (18/05) <b>Neuroanatomy, Circuits</b>	Day 5 (19/05) <b>Imaging and optogenetics</b>	Day 6 (22/05) <b>Electrophysiology</b>	Day 7 (23/05) <b>fMRI Population studies</b>	Day 8 (24/05) <b>Computational neuroscience, robotics</b>
<b>Breakfast [8:00 - 08:30]</b>				08:00 - 09:00				08:30 - 09:30
<b>Lecture I [8:30 - 10:00]</b>	Gaia Tavosanis 08:30 - 08:45 <b>Introduction</b>  Sandra Blaess 08:45 - 10:15 <b>Neuronal specification and differentiation</b>	Susanne Schoch McGovern <b>The synaptic vesicle cycle</b>	Eckhard Mandelkow <b>Tau and neurodegenerative tauopathies</b>	Sach Mukherjee 09:00-10:00 <b>Machine learning and statistics: key concepts for next-generation biomedical research</b>	Heinz Beck <b>In vivo Imaging approaches</b>	Christian Henneberger and Tony Kelly <b>Basic introduction into electrophysiological recording techniques and their application</b>	Tony Stöcker <b>Population Neuroimaging Acquisition Methods</b>	Jakob Macke 09:30 - 10:30 <b>Basic principles of computational neuroscience</b>
<b>Coffee Break [10:00 - 10:30]</b>	10:15 - 10:45							10:30 - 11:00
<b>Lecture 2 [10:30 - 12:00]</b>	Pietro Pily Boyl 10:45 - 12:00 <b>Genetic tools for neuroscience research</b>	Walker Jackson <b>Genome manipulation with CRISPR/Cas9</b>	Frank Bradke <b>Mechanisms of Axon Regeneration</b>	Michael Pankratz <b>Connectomes and Beyond</b>	Stefan Remy <b>Optogenetics and manipulation of neural circuits</b>	Florian Mormann <b>Extracellular electrophysiology in humans: Cognitive adventures of single neurons in the medial temporal lobe</b>	<b>Tour through one Rhineland study center</b> 11:00- 12:30 (no lunch @DZNE)	Jürgen Gall 11:00 - 12:30 <b>Video Analysis for Studying the Behavior of Humans and Mice</b>
<b>Lunch &amp; travel [12:00 - 13:30]</b>	lunch @ DZNE	lunch @ DZNE	lunch @ DZNE	lunch @ DZNE	lunch @ DZNE	lunch @ DZNE	lunch @ <b>study center</b>	lunch @ DZNE
<b>Experimental part [13:30 - 18:30]</b>	Broemer (2) Jackson (4) Sylvester (6) <b>at 13:15</b>	Di Monte (4) Schoch McGovern (2) Tavosanis (2) Till (4)	Ehninger (2) Krauss (2) Mandelkow (4) Till (4) Vorberg (3)	Fuhrmann (2) Oberländer (2) Schwarz (4) Zimmer (4)	Remy (3) Bradke (3) Fuhrmann (2) Henneberger (2) Pankratz (3)	Beck (3) Berger (2) Henneberger (3) Steinhäuser (3)	<b>Ends at 18:00!</b> Ettinger (4) Stöcker (4) <b>at 13:50</b> Weber (4)	Bennewitz (2) Blaess (3) Macke (3) Schultz (3)
<b>Dinner</b>	-	-	-	-	-	-	<b>Dinner @ DZNE 18:30 - 20:00</b>	-
<b>Evening</b>	<b>Movie Night</b> with pizza and drinks			<b>Tour: The Night Watchman of Bonn</b>			<b>Brian Knutson, Prof.</b> Neural prediction of risky choice: From rats to risk markets	<b>Pub Crawl</b> with BIGS Neuroscience students