



NEURO TECHNOLOGY CENTER
 @COLUMBIA UNIVERSITY

2015 Kavli Futures Symposium: “Next Generation NeuroTechnologies”

September 26th, 2015
 550 West 120th St.
 5th floor Auditorium, NWC Building,
 Columbia University, New York City

Saturday September 26th

Breakfast (5 th floor mezzanine NWC)	8:00 – 8:30am
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Speaker	Title	Time
Rafael Yuste, Columbia	Welcome	8:30 – 8:35am
Miyoung Chung, Kavli Foundation	Introduction Kavli Futures Symposium	8:35 – 8:40am
Tom Kalil, Deputy Director for Technology and Innovation	White House Brain Initiative	8:40 – 9:00am

Session I: Neuro Chemistry Moderator: Virginia Cornish		
Anne Andrews, UCLA	“Micro- to Nanoscale Neurotransmitter Sensors”	9:00 – 9:30am
Dirk Trauner, Munich	“Controlling Biological Activity with Photopharmacology”	9:30 – 10:00am
Luke Lavis, HHMI Janelia	“From Drugs to Dyes and Back Again”	10:00 – 10:30am
<i>Discussion: Chemistry Technologies for Neuro</i>		10:30 – 10:45am

<i>Coffee Break</i> (5 th floor mezzanine NWC)	10:45 – 11:00am
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Session II: Neuro Computation Moderator: Liam Paninski		
Jonathan Pillow, Princeton	“Flexible, scalable statistical methods for modeling the representation of sensory and decision-related information in neural populations”	11:00 – 11:30am
Dmitri Chklovskii, Simons Center for Data Analysis	“Similarity matching: A principle of neural computation”	11:30 – 12:00pm
Jeremy Freeman, HHMI Janelia	Computation + Neuroscience	12:00 – 12:30pm
<i>Discussion: Neuro Computation Technologies</i>		12:30 – 12:45pm

Lunch	12:45 -2:00pm
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(Optional) NTC NeuroTechnology Fair (6 th floor mezzanine NWC)	1:00 – 2:00pm
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Session III: Nano Neuro Moderator: Ken Shepard		
Jon Viventi, Duke	“High-Resolution Brain Machine Interfaces using Flexible Silicon Electronics”	2:00 – 2:30pm
Polina Anikeeva, MIT	“Interrogation of Neural Circuits with Optoelectronic and Magnetic Materials”	2:30 – 3:00pm
Hong-kun Park, Harvard	“CMOS-Nanoelectrode Array for High Fidelity, Multiplexed Interrogation of Neuronal Networks”	3:00 – 3:30pm
<i>Discussion: Nano Neuro Technologies</i>		3:30 – 3:45pm

<i>Coffee Break</i> (5 th floor mezzanine NWC)	3:45 – 4:00pm
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Session IV: Neuro Imaging Moderator: Darcy Peterka		
Na Ji, Janelia HHMI	“Wavefront shaping for high-resolution deep brain imaging”	4:00 – 4:30pm
Spencer Smith, SLAB UNC	“Multiplexed roving surveillance across cortical areas”	4:30 – 5:00pm
Karel Svoboda, Janelia HHMI	“Illuminating the neural circuits underlying behavior”	5:00 – 5:30pm
<i>Discussion: Neuro Imaging Technologies</i>		5:30 – 5:45pm

Rafael Yuste	<i>Closing Remarks</i>	5:45 – 6:00pm
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Reception and Poster Session (6 th floor mezzanine NWC)	6:00 – 7:30pm
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