

# 2021 Cognitive & Computational Neuroscience Program Review

Dr. Hal S. Greenwald | November 4-5, 2021 | Virtual

## Agenda Day 1 | November 4, 2021 ~ Times (US Eastern)

Time	Topic	Speaker
8:45	Zoom Login	
9:00	Opening Remarks	Hal Greenwald, Program Officer, Cognitive & Computational Neuroscience
9:15	Innate Memory - the Plasticity of Instinct	Tomas Ryan, Trinity College Dublin
9:45	Restoring Access to Memories "Lost" as a Result of Sleep Deprivation	Steve Ramirez, Boston University
10:15	Biological Algorithms for Learning in the Mammalian Brain	Alison Barth, Carnegie Mellon University
10:45	<b>BREAK</b>	
11:00	Rapid Measurement of Prefrontal Cortical Activity using Parallelized Diffuse Correlation Spectroscopy	Roarke Horstmeyer, Duke University
11:30	The Neural Architecture of Reinforcement Learning in Partially Observable Environments	Sam Gershman, Harvard University
12:00	(DURIP) Bio-X Interdisciplinary Research Platform	Brian Kim, University of Central Florida
12:30	<b>LUNCH/Networking in Wonder</b>	
13:30	Computationally Constrained Control in Complex Causal Tasks	Xaq Pitkow, Baylor College of Medicine/Rice University
14:00	(YIP) Neural Computations and Information flow Underlying Uncertainty Evaluation	Megan Peters, UC Irvine/UC Riverside
14:30	Visually-guided Primate Predation: A computational Neuroethology of Visual Search and Targeting in a Complex, Natural Environment	Alex Huk, University of Texas, Austin
15:00	A White Matter Cable Theoretic Model of EEG Biorhythms	Pamela Douglas, University of Central Florida
15:30	Discussion: Neurophysiological recording in humans and non-human primates	Facilitator: Shuo Wang, Washington Univ. in St. Louis
<b>MEETING ADJOURNED FOR THE DAY</b>		

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## Agenda Day 2 | November 5, 2021 ~ Times (US Eastern)

Time	Topic	Speaker
8:45	<b>Zoom Login</b>	
9:00	Topological Identification and Analysis of Cyclic Features in Neural Population Coding	Chad Giusti, University of Delaware
9:30	Spatiotemporal Neurodynamics	Chrystopher Nehaniv, University of Waterloo/University of Hertfordshire
10:00	(YIP) Investigating Single-Neuron Mechanisms of Face Coding in the Human Brain	Shuo Wang, Washington Univ. in St. Louis/WVU
10:30	<b>Coffee/Networking in Wonder</b>	
11:00	(DEPSCoR) Using Meta-Plasticity to Discover the Biophysics of Learning	Robert Rosenbaum, University of Notre Dame
11:30	Probing Plasticity of Color Perception with the Oz Vision Platform; (MURI) Probing, Modeling & Reprogramming Visual Perception at the Level of Individual Photoreceptors	Ren Ng, UC Berkeley
12:30	<b>Lunch/Networking in Wonder</b> <i>Today only: Reserved area in Wonder for graduate students &amp; postdocs</i>	
13:30	Minimal Models of Sensory Perception	Sarah Marzen, Claremont McKenna College
14:00	Computing in Holographic Representation	Bruno Olshausen, UC Berkeley
14:30	Cognitive Maps in Rats, Robots & Men: A Brain Inspired, Neuroevolutionary Approach	Jeff Krichmar, UC Irvine
15:00	Discussion: Prediction & Predictive Coding	Facilitator: Sarah Marzen, Claremont McKenna College
<b>MEETING ADJOURNED</b>		