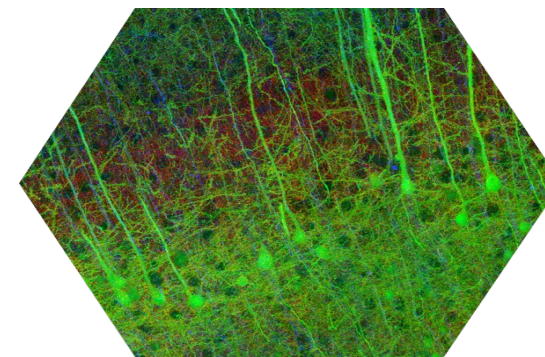
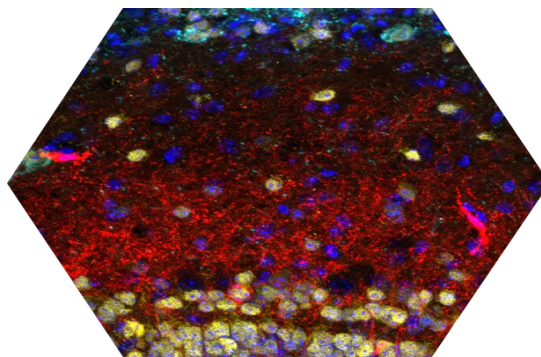
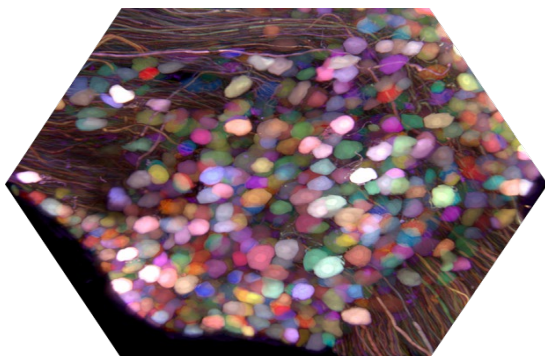


Labroots Neuroscience 2021: Integrating Theories of the Brain

- Keynote Presentations: **BRAIN & BRAINWORKS**
- Success Stories
- Data-Driven (AI) Approaches
- Theory-Driven (Mechanistic) Approaches
- Debate: Can we Generate an Organized Theory of the Brain? (For understanding cognition/memory, perception, behavior)



August 25, 2021, 12-1pm EST – Keynote Presentations



John J. Ngai, PhD
Director, NIH BRAIN Initiative
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Mohammad M. Ghassemi, PhD
NIH Data Scholar, Assistant Professor of
Computer Science and Engineering at Michigan
State University (MSU)
[BIOGRAPHY](#)



Susan Wright, PhD
Program Director for Big Data and Computational
Science, National Institute on Drug Abuse (NIDA),
Division of Neuroscience and Behavior (DNB)
[BIOGRAPHY](#)



Grace Peng, PhD
Director of Mathematical Modeling, Simulation
and Analysis, National Institute of Biomedical
Imaging and Bioengineering, National Institutes
of Health
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Hsiao Yu (Christina) Fang, PhD
Scientific Program Manager in the NINDS Systems
and Cognitive Neuroscience Cluster
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James Gnadt, PhD
Program Director, Systems and Cognitive
Neuroscience, National Institute of Neurological
Disorders and Stroke
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Register at: <https://www.labroots.com/virtual-event/neuroscience-2021/agenda>



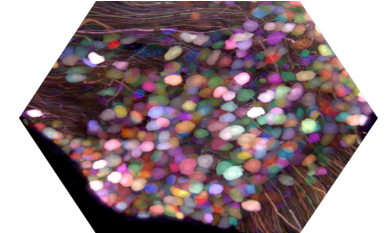
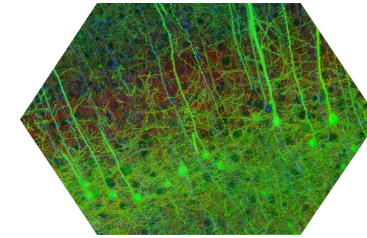
Dimensions of varia cortex

Brent Doiron, PhD

Professor of Neurobiology and St

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Cortical Chimera States Predict Epileptic Seizures

Terrence J Sejnowski, PhD

Francis Crick Professor, The Salk Institute for Biological Studies; Distinguished Professor of Biology and Computer Science and Engineering, University of California, San Diego

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Orchestrating the Brain for Social Behavior

Richard Tsien, PhD

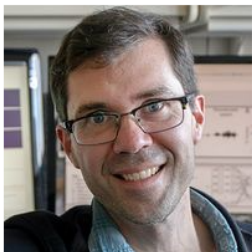
Chair, Neuroscience and Physiology; Director, Neuroscience Institute; NYU Langone Health; NYU Grossman School of Medicine

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Success Stories



Can Deep Learning Produce a General Model of Natural Sound Encoding by Auditory Cortex?

Stephen V. David, Ph.D.

Associate Professor, Oregon Hearing Research Center, Oregon Health and Science University

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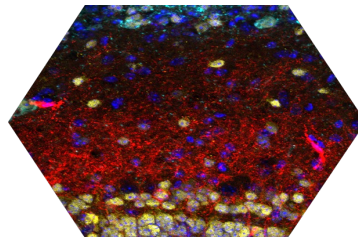
Mine Your Own View: A New Self-Supervised Learning Approach for Building Stable Representations of Neural Activity

Eva L. Dyer, PhD

Assistant Professor of Biomedical Engineering, Georgia Institute of Technology; Emory University

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Machine Learning Approaches to Characterizing and Interpreting Brain-wide Dynamics

Shella Keilholz, Ph.D.

Professor, Emory University/Georgia Tech Biomedical Engineering Department

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Learning Electrical Connectomes of Neuropsychiatric Disorders and Behaviors

David Carlson

Assistant Professor, Civil and Environmental Engineering and Biostatistics and Bioinformatics Duke University

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Data-Driven (AI) Approaches

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Sequences and Modularity of Dynamic Attractors in Inhibition-Dominated Neural Networks

Carina Curto

Professor and Co-Associate Head of Graduate Studies, Department of Mathematics Pennsylvania State University

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Null Models of Large Neural Networks

Ilya Nemenman

Professor of Physics and Biology, Emory University

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Can Multiscale Computer Modeling Save the Human Genome Project?: Climbing the Omes for Schizophrenia

William Lytton, MD

SUNY Distinguished Professor, SUNY Downstate Health Sciences University

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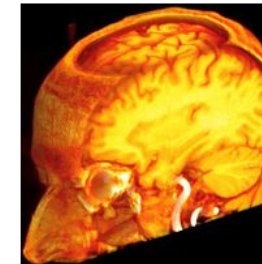
Mechanistic Models of Cognition: from Perception to Navigation to Semantic Development

Surya Ganguli, PhD

Associate Professor, Department of Applied Physics, Stanford University

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Rational Thoughts in Neural Codes

Xaq Pitkow, Ph.D.

Associate Professor, Rice University

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Theory-Driven (Mechanistic) Approaches

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Debate

-- Can we generate an ORGANIZED THEORY of the brain? (For understanding cognition/memory, perception, behavior)



Florian Engert, PhD

Professor of Molecular and Cellular
Biology, Harvard University

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David Kleinfeld, PhD

Dr. George Feher Endowed Chair in
Experimental Biophysics,
Distinguished Professor, UC San Diego

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August 25, 2021, 3pm EST

– Listen to debate & post your argument!