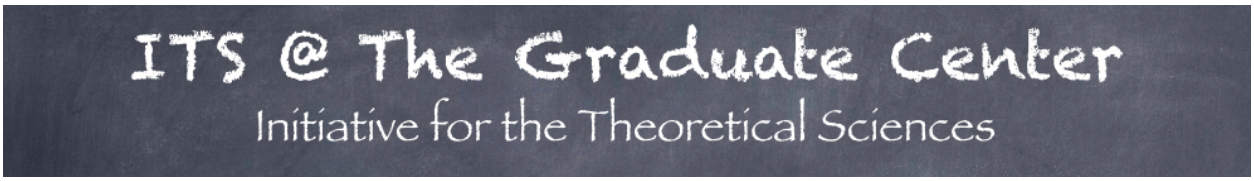

Problems in neural and cognitive computation

Physicists have been engaged in exploring the brain at least since the nineteenth century. In modern times, this exploration has expanded in many directions, and in this symposium we celebrate this diversity of theoretical and experimental approaches: quantifying more complex naturalistic behaviors in humans and other animals, design principles that organize our understanding of the algorithms implemented by the brain, and the ways in which the physical patterns of neural connections enable and limit the brain's computational functions. Within the bounds of virtual interactions, we have a format that encourages interaction and discussion.

Lectures will be held online, https://princeton.zoom.us/j/3025052077
To receive a password, please register at https://forms.gle/nu8Xuw3bsV9csjG98

Friday 17 April 2020

10:00 AM **Using food-caching birds to study the neuroscience of episodic memory**
Dmitriy Aronov, Columbia University

11:30 AM break

12:00 PM **Design principles of adaptable neural codes**
Ann Hermundstad, Janelia Research Campus HHMI

1:30 PM break

2:30 **Human planning in large state spaces**
Wei Ji Ma, New York University

4:00 PM break

4:30 PM **Using connectomics to investigate innate behaviors and learning**
Sebastian Seung, Princeton University

Sponsored by the Initiative for the Theoretical Sciences, and by the CUNY doctoral programs in Physics and Biology. Supported in part by the Center for the Physics of Biological Function, a joint effort of The Graduate Center and Princeton University.

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