



OIST

OKINAWA INSTITUTE OF SCIENCE AND TECHNOLOGY GRADUATE UNIVERSITY
沖縄科学技術大学院大学

THEORETICAL SCIENCES VISITING PROGRAM

TSVP TALK

CAN WE HOPE FOR SIMPLICITY WHEN DESCRIBING THE BRAIN?

2022
THU. JUN. 23RD

16:00 - 17:00

HYBRID L4E48, ZOOM



For zoom and other details scan QR code or visit groups.oist.jp/tsvp

Every moment millions of neurons in our brain furiously interact with each other. This interaction allows the brain to execute highly complex computations, involving the concerted activity of many individual units. We seek theoretical approaches that can simplify the rich dynamics of neural activity. I will show how by drawing on concepts from statistical physics such as Ising models and renormalization group, we can capture the collective nature of neural activity. Additionally, I will explain how the scaling we have uncovered in the system allows us to remain optimistic, and how it hints that emergent simplicity does indeed exist in the highly complex system that is the brain.

UNIVERSITY OF WASHINGTON

LEENOY MESHULAM

Leenoy Meshulam is a Swartz Theory postdoctoral fellow at University of Washington, Seattle. She works at the interface of physics and neuroscience, mainly drawing on theoretical frameworks from statistical physics and dynamical systems to uncover principles of brain function. She received her PhD from Princeton University in 2018. Prior to that she completed her undergraduate and masters at Tel Aviv University, Israel. Here at OIST she is looking forward to fruitful collaborations. She will be visiting until July 31st, please don't hesitate to get in touch: leenoy.meshulam@oist.jp



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CONTACT

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