THEORETICAL SCIENCES VISITING PROGRAM

TSVP TALK

A GENERATIVE MODEL of COMMUNICATION in the BRAIN
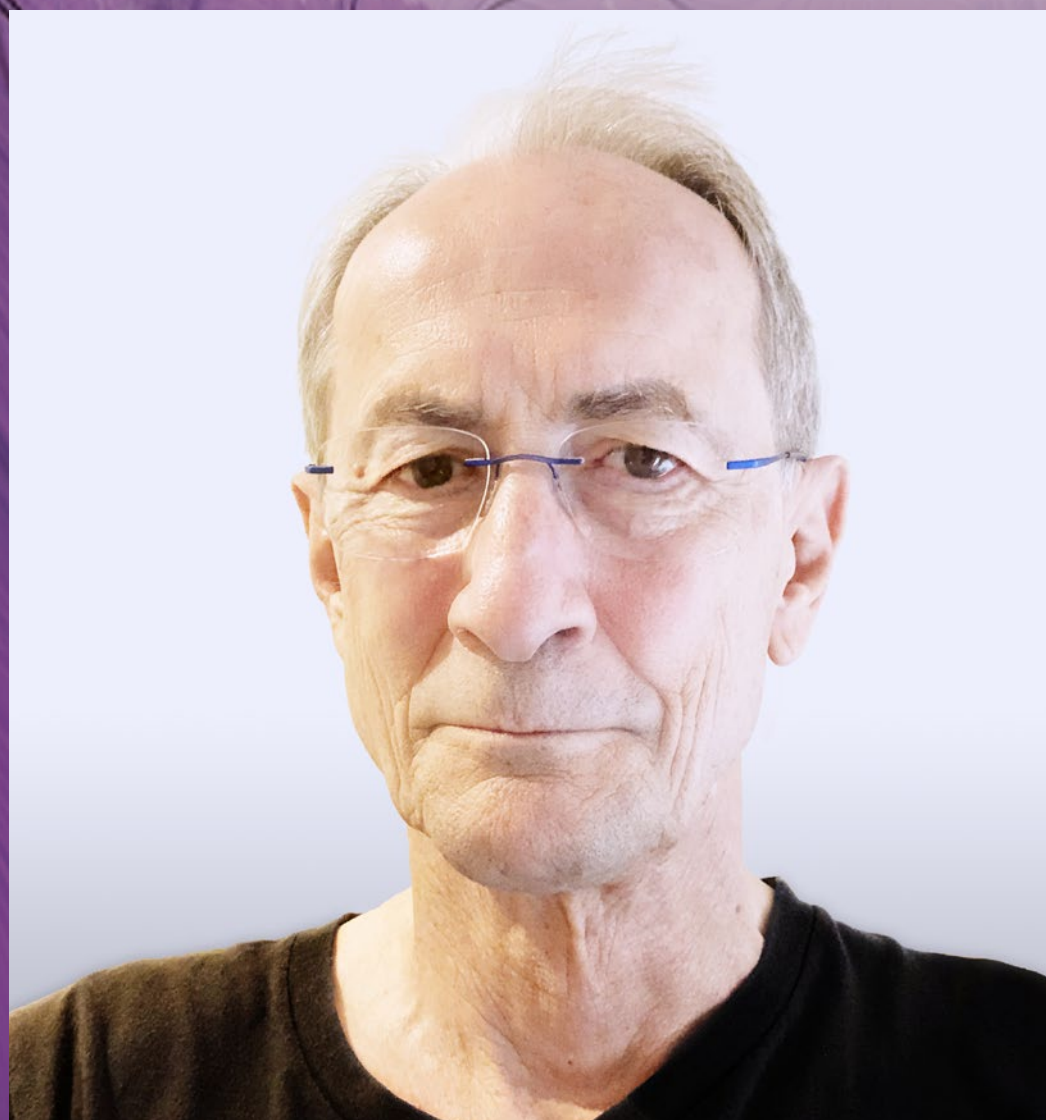
2022 THU. **JUL. 21** ST

16:00 - 17:00

HYBRID L4E48, ZOOM

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Owing to its slow communication rates, billon times slower than silicon, the brain stores its entire dynamics in a massive memory in its largest subsystem, the cortex, which can be read out when needed. The read-out dynamics between its very large networks uses voltage spikes. The code used by spikes is not known, but experimenters have been usably able to model behaviors with mean field solutions. Our group has been developing on alternate code based on a novel interpretation of gamma, the brain's highest voltage frequency. Amongst its significant advantages, the code also suggests how the brain multiplexes, that is has more than one network computation active at the same time, which is an essential property but up to now has had no viable solution.

THE UNIVERSITY OF TEXAS IN AUSTIN

PROF. DANA BALLARD

Dana Ballard is a professor of Computer Science. His focus is on reverse engineering the brain where models of the brain are motivated by the technical problems the Brain's circuits solve. These modules combine data from Neuroscience and Psychology as well Computer Science.

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