

UCLA

Brain Research Institute



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Joint Seminars in Neuroscience Series

Integrative Center of Learning and Memory

Distinguished Lecturer

January 18, 2022

12:00p.m. - 1:00p.m. PST

“How Does The Brain Figure Out The Structure of Problems”

Timothy Behrens, M.Eng., D.Phil

Professor of Computational Neuroscience

Nuffield Department of Clinical Neurosciences,
University of Oxford;

Honorary Lecturer, Wellcome Centre for Human
Neuroimaging

University College London

Faculty Host: Nanthia Suthana and ICLM

Zoom Seminar:



<https://uclahs.fyi/3nbLzud>

Abstract: The cellular representations and computations that allow rodents to navigate in space have been described with beautiful precision. In this talk, I will show that some of these same computations can be found in humans doing tasks that appear very different from spatial navigation. I will describe some theory that allows us to think about spatial and non-spatial problems in the same framework, and I will try to use this theory to give a new perspective on the beautiful spatial computations that inspired it. The overall goal of this work is to find a framework where we can talk about complicated non-spatial inference problems with the same precision that is only currently available in space.

Sponsored by: The UCLA Brain Research Institute, The David Geffen School of Medicine at UCLA, and
The Semel Institute for Neuroscience & Human Behavior



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