# Mufeng Tang

MRC Brain Network Dynamics Unit, University of Oxford OX1 3TH Oxford, UK

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#### **EDUCATION**

University of Oxford Oxford, UK

DPhil (PhD) Clinical Neurosciences

2021 - 2025 (expected)

Research topic: Computational models of the hippocampal formation.

University of Chicago Chicago, IL 2019 - 2021 MS Statistics, GPA:3.8/4.0

University College London London, UK BASc Science and Engineering, First Class Honours 2016 - 2019

# PUBLICATIONS/PREPRINTS

Tang, M., Salvatori, T., Millidge, B., Song, Y., Lukasiewicz, T. and Bogacz, R., 2022. "Recurrent predictive coding models for associative memory employing covariance learning". PLOS Computational Biology. [URL] [Code]

Tang, M., Yang, Y. and Amit, Y., 2022. "Biologically plausible training mechanisms for self-supervised learning in deep networks". Frontiers in Computational Neuroscience. [URL] [Code]

### REFEREED CONFERENCE ABSTRACTS

Tang, M., Salvatori, T., Millidge, B., Song, Y., Lukasiewicz, T. and Bogacz, R., 2022. "Associative memory via covariance-learning predictive coding networks". In: Memory in Artificial and Real Intelligence Workshop at the 36th Conference on Neural Information Processing Systems (NeurIPS). [URL]

#### AWARDS AND SCHOLARSHIPS

University of Oxford, St Cross E.P. Abraham Scholarship £15,000/annum	Sep 2021
University of Chicago, tuition scholarship for academic excellence \$5540/quarter	July 2020
University of Chicago, tuition scholarship \$4610/quarter	July 2019

## RESEARCH EXPERIENCE

Grossman Center for Quantitative Biology and Human Behavior Chicago, IL Research Intern Aug 2020 - Dec 2021

Advisor: Prof. Jason MacLean

Topic: Spiking neural network models for the neocortex.

University of Chicago, Department of Statistics Chicago, IL

Student Researcher June 2020 - Sep 2021

Advisor: Prof. Yali Amit

Topic: Biologically plausible self-supervised deep learning models for the visual system.

UCL Centre for Advanced Spatial Analysis London, UK

Undergraduate Researcher

Oct 2018 - June 2019

Advisor: Prof. Steven Gray

Topic: Semantic analysis of geo-tagged Twitter contents to inform congested areas in London.

## COMPETITIONS

Kaggle ASHRAE Great Energy Predictor, Silver Medal (among 3,600 teams)

Kaggle Competition Dec 2019

#### TEACHING EXPERIENCE

Supervisor of MSc projects at University of Oxford

MSc Mathematics Thesis Project

Winter 2022

Teaching assistant at University of Chicago STAT25025 Machine Learning and Large-scale Data Analysis *Spring 2021*