

Mufeng Tang

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EDUCATION

University of Oxford DPhil (PhD) Computational Neuroscience Research topic: <i>Computational models of the hippocampal formation based on predictive coding.</i>	Oxford, UK <i>2021 - 2025 (expected)</i>
University of Chicago MS Statistics, GPA:3.8/4.0	Chicago, IL <i>2019 - 2021</i>
University College London BASc Science and Engineering, First Class Honours	London, UK <i>2016 - 2019</i>

PUBLICATIONS/PREPRINTS

- Tang, M.**, Barron, H., and Bogacz, R., 2023. "Sequential memory with temporal predictive coding". **arXiv**. [URL] [Code]
- Millidge B., **Tang, M.**, Osanlouy M., and Bogacz, R., 2023. "Predictive coding networks for temporal prediction.". **bioRxiv**. [URL] [Code]
- Tang, M.**, Salvatori, T., Millidge, B., Song, Y., Lukasiewicz, T., and Bogacz, R., 2023. "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

- Millidge B., **Tang, M.**, Osanlouy M., and Bogacz, R., 2023. "Predictive coding networks for temporal prediction.". In: **Cognitive Computational Neuroscience (CCN)**.
- Li T., **Tang, M.**, and Bogacz, R., 2023. "Modelling novelty detection in the cortex with predictive coding". In: **Cognitive Computational Neuroscience (CCN)**.
- 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	<i>Sep 2021</i>
University of Chicago, scholarship for academic excellence \$5540/quarter	<i>July 2020</i>
University of Chicago, scholarship \$4610/quarter	<i>July 2019</i>

RESEARCH EXPERIENCE

Grossman Center for Quantitative Biology and Human Behavior Research Intern Advisor: Prof. Jason MacLean Topic: Spiking neural network models for the neocortex.	Chicago, IL <i>Aug 2020 - Dec 2021</i>
University of Chicago, Department of Statistics Student Researcher	Chicago, IL <i>June 2020 - Sep 2021</i>

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

Winter 2022

MSc Mathematics Thesis Project

Teaching assistant at University of Chicago

Spring 2021

STAT25025 Machine Learning and Large-scale Data Analysis