



MEET SHANAHAN FELLOW

YILIU WANG

Yiliu Wang joined the Allen Institute in 2023 as a Shanahan Foundation Fellow and a member of the modeling, analysis and theory team. She received a Master's degree in Mathematics and Statistics from the University of Oxford and earned her PhD in Statistics from the London School of Economics, supervised by Prof. Milan Vojnovic. During her PhD research, Yiliu studied inference, optimization, approximation and selection problems in relational learning, a subdivision of high-dimensional statistics, and developed a stochastic valuation function system to evaluate sets of items and learn about individual representations through group outcomes.

What I'm working on: Modeling neurons as groups and understanding how neuronal properties such as cell types contribute to the neuron population activity and connectivity. Exploring the field of neuroscience and doing broad literature reviews in a couple of directions of interest, including the tiling hypothesis, multi-areal signal transmission and neuromodulator networks.

During my fellowship: I would like to link network neuroscience with relationship learning in the brain, from both the structural and functional perspective.

I am excited about the growing data we have in the field of neuroscience. With the massive data produced at the Institute, we can fit more and more complicated and realistic models, so as to better understand the structure and behavior of the brain. While my previous research is mainly theoretical, I am very interested to see how the model can be applied and the power it could bring to the whole field.



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