Gengshuo John Tian

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Education

2020 – present	PhD Program in Computational and Applied Mathematics at the **University of Chicago** Advisor: Prof. Brent Doiron
2019 – 2020	PhD Program in Mathematics at the **University of Pittsburgh** Advisor: Prof. Brent Doiron
2015 – 2019	BSc in Mathematics and Applied Mathematics, **Beijing Normal University**

Publications

[1] **Tian, G.**, Huang, T., & Wu, S. (2019). Excitation-Inhibition Balanced Spiking Neural Networks for Fast Information Processing. In *IEEE International Conference on Systems, Man and Cybernetics* (pp. 249-252).

[2] Liu, X., Zou, X., Ji, Z., **Tian, G.**, Mi, Y., Huang, T., Wong, K. M., & Wu, S. (2019). Push-pull Feedback Implements Hierarchical Information Retrieval Efficiently. In *Advances in Neural Information Processing Systems* (pp. 5702-5711).

[3] **Tian, G.**, Li, S., Huang, T., & Wu, S. (2020). Excitation-inhibition Balanced Neural Networks for Fast Signal Detection. *Frontiers in Computational Neuroscience*, 14, 79.

[4] Liu, X., Zou, X., Ji, Z., **Tian, G.**, Mi, Y., Huang, T., Wong, K. M., & Wu, S. (2022). Neural feedback facilitates rough-to-fine information retrieval. *Neural Networks*.

[5] **Tian, G. J.**, Zhu, O., Shirhatti, V., Greenspon, C., Downey, J. E., Freedman, D. J., & Doiron, B. (2024). Neuronal firing rate diversity lowers the dimension of population covariability. bioRxiv.

Talks and conference presentations (by topic)

Neuronal firing rate diversity lowers the dimension of population covariability

Sep 2023	Bernstein Conference (poster)	Berlin, Germany
Oct 2023	20 Years of Collaboration in Computational Neuroscience (talk)	Chicago, IL, USA
Feb 2024	Computational and Systems Neuroscience (COSYNE) (poster)	Lisbon, Portugal
Sep 2024	Bernstein Conference – Neural Diversity and Computation Workshop (virtual talk)	Frankfurt, Germany
Oct 2024	Society for Neuroscience Meeting (SfN) (poster)	Chicago, IL, USA