Jun (Keith) Yang

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Education

2024 – 2029 (expected) **Ph.D.** (Quantitative Biosciences), **Georgia Institute of Technology**
Advisor: Dr. Hannah Choi

2020 – 2024 **B.Sc. & B.Eng.**, **Tsinghua University**
Major: Mathematics and Physics + Electrical Engineering and Automation

Research Interests

- Dynamical systems — neural dynamics
- Statistical field theory for neural networks
- Information theory

Generally speaking, my research aims at revealing the fundamental link between structure, dynamics, and function of neuronal networks.

Publications

Permanent preprints

[1] **Yang, J.** (2025). Theories on random recurrent neural networks: a brief review. *OSF Preprints*, https://doi.org/10.31219/osf.io/ztfn7_v2

Journal articles

[1] **Yang, J.**, Zhang, H. & Lim, S. (2024). Sensory-memory interactions via modular structure explain errors in visual working memory. *eLife* **13**, RP95160. https://doi.org/10.7554/eLife.95160.4

Summer Schools and Workshops

2025 **Modeling Software Workshop**, Allen Institute
A workshop on BMTK and VND.

2024 **CNeuro 2024**, Tsinghua University
A one-week computational neuroscience summer school.

2023 **The 12th Computational Neuroscience Winter School**, Online
A winter school organized by Shanghai Jiao Tong University

Scholarships & Awards

2021 – 2023 **Scholarship of Scientific or Technological Innovation Excellence**
Tsinghua University

2020 – 2022 **Scholarship of Academic Excellence**
Tsinghua University

Teaching

Teaching assistantship (at Georgia Tech)

Term	Course	Duty
2025 Fall	MATH 4221 | Stochastic Processes I	Grader
2025 Fall	MATH 4581 | Math Methods in Engr	This is a course on PDEs. Grader
2025 Summer	MATH 1553 | Intro to Linear Algebra	Taught studio sessions
2025 Spring	MATH 1553 | Intro to Linear Algebra	Taught studio sessions (i.e., recitations)
2024 Fall	MATH 1554 | Linear Algebra	Grader

Technical skills

	Skill	Level	Detail
Programming/ Typesetting	C	■■□□	First programming language learned.
	Python	■■□□	For scientific computing (BMTK, AllenSDK, PyNest, NumPy, scikit-learn, CVXPY, PyTorch, Matplotlib, IDTxl, etc.).
	MATLAB	■■■□	Main tool for simulation and data analyses. MatCont, MatPower, MINT.
	Wolfram Mathematica	■□□□	Beginner.
	Julia	■□□□	Beginner.
	LaTeX & Typst	■■■□	Typesetting academic papers.
Software	Microsoft Office Suite	■■■■	PowerPoint, Word, Excel, OneNote, etc.
	Adobe Photoshop & Illustrator	■■■□	Making figures for academic papers.
	Git	■■□□	Code version management.
Languages	English	■■■□	Fluent in academic speech and writing.
	Chinese	■■■■	Native language.

■□□□ basic knowledge ■■■□ extensive knowledge
■■□□ intermediate knowledge ■■■■ expert knowledge