

# Jun (Keith) Yang

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## Education

- 2024 – 2029 **Ph.D.** (Quantitative Biosciences), **Georgia Institute of Technology**  
(expected) Advisor: Dr. Hannah Choi
- 2020 – 2024 **B.Sc. & B.Eng., Tsinghua University**  
Major: Mathematics and Physics + Electrical Engineering and Automation

## Research Interests

- Neural dynamics
- Statistical field theory for neural networks
- Predictive coding and active sensing

## 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\\_v3](https://doi.org/10.31219/osf.io/ztfn7_v3)

### 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    | Grader  |
| 2025 Summer | MATH 1553   Intro to Linear Algebra | Taught studio sessions                        |
| 2025 Spring | MATH 1553   Intro to Linear Algebra | Taught studio sessions<br>(i.e., recitations) |
| 2024 Fall   | MATH 1554   Linear Algebra          | Grader  |

## Technical skills

|                             | Skill                               | Level               | Detail   |
|-----------------------------|-------------------------------------|---------------------|--|
| Programming/<br>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.<br>MatCont, MatPower, MINT.  |
|                             | Wolfram<br>Mathematica              |                     | Beginner.  |
|                             | Julia                               |                     | Beginner.  |
|                             | LaTeX &<br>Typst                    |                     | Typesetting academic papers.   |
| Software                    | Microsoft<br>Office Suite           |                     | PowerPoint, Word, Excel, OneNote, etc.   |
|                             | Adobe<br>Photoshop &<br>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    |  |