Wenjie Li

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EDUCATION

Guilin University of Electronic Technology Sep. 2022 – Jun. 2026
Bachelor of Science in Information and Computing Science

- Overall GPA: 86.5/100, Major Ranking: Top 10%
- Core Courses: Mathematical Analysis, Advanced Algebra, Ordinary Differential Equations, Probability & Statistics, C Programming
- International Exchange: Academic visits to Foreign Trade University (Vietnam), University of Oxford, and University of Cambridge (UK) (2024)

RESEARCH EXPERIENCE

Research Assistant – Quantum Computing Aug. 2026 – Present
AI Thrust, The Hong Kong University of Science and Technology (Guangzhou) | Prof. Xin Wang

- Researching quantum algorithms and query complexity for sparse Pauli decomposition.
- Analyzing sparse Walsh–Hadamard recovery under coherent numerical-query models, including comparisons with classical and quantum access complexity.

First-Author Research: Novel Multi-scroll Chaotic System for Secure Communication Feb. 2024 – May 2026
Guilin, China | Advised by Prof. Guodong Li

- Designed and implemented a novel multi-dimensional, multi-scroll chaotic system from scratch, significantly enhancing complexity and cryptographic potential over classical designs.
- Performed rigorous theoretical analysis including Lyapunov exponent calculation and bifurcation diagrams to validate chaotic dynamics.
- Achieved end-to-end validation by translating the mathematical model into a functional analog circuit and implementing it on a DSP platform, demonstrating strong hardware-software co-design skills.
- Published findings as the first author in the SCI journal *Physica Scripta*.

Co-authored Research on Fractional-order Hyperchaotic Systems 2023 – 2024
Guilin, China | University Innovation Program

- Contributed to the design and dynamical analysis of a 4D fractional-order multi-wing hyperchaotic system.
- Assisted in algorithm development and data analysis, resulting in a co-authored paper in *Nonlinear Dynamics* (SCI).

PUBLICATIONS

- **Li, W.**, Li, G., Zhang, J., Chen, X. Generation, dynamical analysis and applications of a novel multi-dimensional multi-scroll chaotic attractor. *Physica Scripta*. (First Author, SCI)
- Li, G., Diao, L., Xue, L., & **Li, W.** Design and DSP implementation of a 4D fractional-order multi-wing hyperchaotic system. *Nonlinear Dynamics*. (Co-author, SCI)
- Song, X., Li, G., Wen, X., & **Li, W.** Design of a Pixel-Sensitive Transfer Encryption Algorithm. *Cluster Computing*. (Co-author, SCI)

TECHNICAL SKILLS & LANGUAGES

- Programming: Proficient in Python, MATLAB, C; Familiar with LaTeX, Git
- Hardware Platforms: DSP Development, Analog Circuit Design, Simulink
- Research Methods: Mathematical Modeling, Dynamical Systems Analysis, Numerical Simulation, Algorithm Design
- Languages: Chinese (Native), English (Fluent, CET-6: 520)

SELECTED HONORS

- 2026: University Outstanding Graduate
- 2024: Provincial Second Prize, 10th National College Students Statistical Modeling Competition
- 2024: Guangxi Division Bronze Award, China International College Students' Innovation Competition
- 2023: Provincial Third Prize, 15th National Undergraduate Mathematics Competition (Mathematics Major Group)
- 2023–2024: University Second-Class Scholarship (two consecutive years)