

Safa Janajra

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[LinkedIn Profile](#)

EDUCATION

North Carolina State University, Raleigh, NC 2024 Ph.D. in Applied Mathematics
North Carolina State University, Raleigh, NC 2019 M.S. in Applied Mathematics
Al-Najah National University, Nablus 2009 B.S. in Electrical Engineering

RELEVANT COURSES

Numerical Analysis; Mathematical Modeling of Physical and Biological Processes; Numerical Methods for PDEs (Finite Difference and Finite Volume Methods); Uncertainty Quantification for Physical and Biological Models. Machine Learning

RESEARCH EXPERIENCE

North Carolina State University 2020–2024

- Utilized Mathematica, Fortran, and MATLAB to simulate and analyze mathematical models. •
- Conducted extensive literature reviews and applied appropriate techniques to solve research problems.
- Developed novel high-order numerical methods for nonlinear PDEs.
- Applied statistical methods for data analysis.
- Authored and contributed to peer-reviewed publications.

Duke University Summer 2020 Worked on mathematical modeling to predict time to HIV rebound from viral reservoir size after treatment interruption. Used R for data analysis and modeling.

TEACHING EXPERIENCE

Louisburg College 2025–Present *Assistant Professor*

- Teach Quantitative Literacy and Precalculus Algebra.
- Facilitate weekly math lab sessions (2 hours per week), supporting students from all majors.
- Serve as a member of the Faculty Evaluation and Professional Development Committee.

North Carolina State University 2020–2023 Progressed from Recitation Leader to Instructor of Record.

- Delivered lectures, created and graded exams, held office hours, and managed course instruction. Courses Taught:

- Calculus III (Summer 2021–Fall 2023)
- Introduction to Linear Algebra and Matrices (Spring 2021)
- Computational Mathematics for Life and Management Sciences (Fall 2020)
- Calculus II (Spring 2020)

SKILLS

Programming: Fortran, MATLAB, Python, R, Mathematica
Tools: LaTeX, Microsoft Excel

PUBLICATIONS

1. Chertock, A., Herty, M., Iskhakov, A.S., Janajra, S., Kurganov, A., Luk'achov'a-Medvid'ov'a, M. (2024). New high order numerical methods for hyperbolic systems of nonlinear PDEs with uncertainties. *Communications on Applied Mathematics and Computation*, 6(3), 2011–2044.
2. Chertock, A., Iskhakov, A.S., Janajra, S., Kurganov, A. (2023). Spline-based stochastic collocation methods for uncertainty quantification in nonlinear hyperbolic PDEs. In *European Conference on Numerical Mathematics and Advanced Applications*, pp. 239–248.

CERTIFICATIONS

- Data Science and Machine Learning: Making Data-Driven Decisions, MIT-IDSS Oct 2024 • Leadership in Resilience and Well-Being Certificate, NCSU 2024 • Cisco Certified Networking Associate (CCNA) 2014 • Cisco Certified Entry Networking Technician (CCENT) 2013