

UNIVERSITY OF SOUTH CAROLINA
DEPARTMENT OF MATHEMATICS
Postdoctoral Fellow in Modeling and Simulation of Complex Systems

Professor Qi Wang's group in the Department of Mathematics at the University of South Carolina (USC) seeks applications for two Postdoctoral Fellow positions in applied and computational mathematics, focusing on the modeling and simulation of complex systems. The successful candidates will join the NSF-funded project "AI-enabled Devices for the Advancement of Personalized and Transformative Healthcare in South Carolina (ADAPT)," contributing to research in data-driven and mechanistic modeling as well as the simulation of complex systems integral to the project. Research areas encompass modeling and simulation of ion transport and fluid-structure interaction in complex geometries, phase separation in complex fluids, tumor growth dynamics, phase-field modeling of solid dynamics, and the development of efficient numerical approximations for thermodynamically consistent PDEs. Additionally, the roles involve work in reduced order modeling of high-dimensional data, feature extraction from medical data, identification of dynamical systems from time series data, machine-learning-inspired numerical methods for solving partial differential equations, and data generation from limited datasets, among other topics.

Candidates must have a Ph.D. in Mathematics or fields related to AI for science by the start date of employment, an excellent research record, and a commitment to contribute to higher education in the future. Applications must be submitted through the University's online employment system (<https://uscjobs.sc.edu/postings/164134>) as well as via MathJobs (<https://www.mathjobs.org/jobs/list/24336>). A completed application will include a cover letter, curriculum vitae, a description of research plans, and three letters of recommendation. The beginning date for the position can be flexible, but no later than August 16, 2024. Applications are accepted and evaluated continuously until the positions are filled. Please address any inquiries to Professor Qi Wang at qwang@math.sc.edu.

The Department of Mathematics (<http://www.math.sc.edu/>), located in the heart of the historic USC campus, currently has 32 tenured and tenure-track faculty, 10 full-time instructors, 57 graduate students, and about 200 undergraduate majors. Faculty research interests include algebra, algebraic geometry, analysis, applied and computational mathematics, constructive approximation, data science, discrete mathematics, geometry, mathematical biology, mathematical education, and number theory. The University also hosts an honors college recently ranked as the nation's best among public school's honors programs, with which the candidate will have the opportunity to work.

The University of South Carolina System is composed of the state's flagship university in Columbia (founded in 1801 and currently one of the top 50 "Best Colleges" according to U.S. News and World Report), three regional comprehensive universities (Aiken, Beaufort, and Upstate), and Palmetto College consisting of four two-year campuses (Lancaster, Salkehatchie, Sumter, Union, and Fort Jackson/Extended University). Together, the USC System institutions offer more than 450 degree programs on campus and online and are uniquely positioned to meet the state's educational, cultural, health, and research needs. The System employs more than 15,000 people who work daily to improve the lives of students, fellow South Carolinians, and the world. Our diverse engaged faculty and staff enjoy a dynamic and intellectually stimulating work environment.

The University of South Carolina is an affirmative action, equal opportunity employer. Minorities and women are encouraged to apply. The University of South Carolina does not discriminate in educational, or employment opportunities based on race, sex, gender, age, color, religion, national origin, disability, sexual orientation, genetics, protected veteran status, pregnancy, childbirth, or related medical conditions.