Research Scientist - Air Traffic Management
University Affiliated Research Center - NASA Ames

The University Affiliated Research Center’s (UARC) [http://uarc.ucsc.edu/](http://uarc.ucsc.edu/) seeks a Research Scientist to join an internationally recognized team conducting cutting-edge research on automating portions of the nation’s air transportation system to conceptualize technologies for the air traffic control system targeted at the year 2025. The incumbent will conduct research and real-time and fast-time simulation of multiple systems with either hardware in the loop or systems in the loop type of simulation using clustered/networked set of machines running this extensive simulation in collaboration with NASA researchers, outside researchers, air traffic controllers, air traffic managers, and contractors.

The successful candidate will: conduct research, development, and evaluation of advanced air traffic control automation concepts. Use Linear and Nonlinear Control techniques for developing traffic flow management algorithms for the Next Generation Air Traffic System; use numerical algorithms and optimization techniques for improving capacity and reducing delays while meeting capacity constraints; apply data mining techniques to large-scale air traffic data and infer historical patterns of weather, traffic, and flow management decisions; propose new automation concepts, help identify issues, and provide solution recommendations; work closely with other project engineers in identifying, evaluating and devising solutions to software and functionality issues; interact with customer (i.e., NASA) to develop and execute research plans, including requirements, design & development, schedules, milestones, and deliverables; and deliver monthly progress report and metrics; publish as first or second author in peer-reviewed journals; Presents own research at seminars and conferences.

Incumbent must possess: A minimum of a Ph.D. in a related engineering field to be considered for the Assistant level. Three years of research experience beyond PhD (postdoctoral training may serve as experience) to be considered for the Associate level.

Demonstrated experience in the following areas: Aerospace engineering, Control Systems and System Dynamics, Linear and Nonlinear Control, Data mining/machine learning, Linear and non-linear Optimization, Simulation and modeling of dynamic systems. Advanced background and experience in numerical analysis, algorithms and scientific computation.

Directly related experience in air transportation system operations and dynamics, aircraft operations and dynamics, air traffic management, the air traffic control domain, and decision-support tool development and testing.
An established and rising research profile demonstrated through a sustained record of academic publications and research projects.

Knowledge and experience in one programming language such as C, C++ or Java is highly desirable.

The University of California (UC) provides exceptional benefits in addition to the special intellectual and cultural advantages of being a member of the UC community. The University offers outstanding health and welfare benefits and programs for secure retirement that are considered to be among the finest in higher education. Our salary structure is highly competitive and commensurate with qualifications and experience.