# Ph.D. Positions-Motion Planning and Control of Multi-Robot Systems

North Carolina A&T State University


**Job Title**  
Ph.D. Positions-Motion Planning and Control of Multi-Robot Systems

**Department**  
Electrical and Computer Engineering

**Institution**  
North Carolina A&T State University  
Greensboro, North Carolina

**DatePosted**  
Jun. 23, 2020

**Application Deadline**  
Open until filled

**PositionStart Date**  
Available Immediately

**Job Categories**  
Graduate Student

**AcademicField(s)**  
Robotics

**Apply By Email**  
iraptis@ncat.edu

**Job Description**

Applications are invited for several Ph.D. positions in Motion Planning and Control of Multi-Robot Systems. The positions are with the Department of Electrical and Computer Engineering at North Carolina A&T State University, and the students will work under the supervision of Dr. Ioannis Raptis.

The research aims to establish a theoretical and computational framework for the design of motion coordination algorithms for fleets of mobile robots that operate in confined spaces. Applications include traffic management in autonomous intersections, urban aerial mobility, and warehouse automation. The research has analytical, computational, and experimental components. The derived algorithms will be validated using actual aerial and ground mobile robots.

Students from all majors relevant to control systems, computer science or engineering, and applied mathematics are encouraged to apply. Preference will be given to candidates with a strong and demonstrated background in at least one of the following topical areas: control theory, discrete mathematics and algorithms, transportation, and programming.

The assistantships include a tuition waiver and a graduate student stipend. Review of submissions will
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begin immediately. Interested students are strongly encouraged to apply early, as the hire of successful candidates will take place on a first-come-first-served basis. The desired start dates are September 2020 and January 2021.

Qualifications:
- M.S. degree in mechanical engineering, electrical and computer engineering, aerospace engineering, mathematics, computer science, or a closely related area.
- Excellent mathematical background preferably in control theory, linear algebra, discrete mathematics, and heuristic algorithms.
- Demonstrated programming experience and experience with embedded systems.
- Good programming skills in MATLAB/SIMULINK.
- Very good English communication skills (written and oral).
- Ability and motivation to conduct independent research.

To Apply:
Please email, as a single .pdf document, the following items to iraptis@ncat.edu: (i) a cover letter (clearly indicating expected start date, relevant experience, and motivation); (ii) detailed Curriculum Vita; (iii) copies of unofficial transcripts; (iv) GRE and TOEFL (for international students) scores—these standardized tests are mandatory; and (iv) copies of relevant publications (if any). Note that only interested candidates will be considered and contacted who clearly show to their cover letter (or application email) how their background and research interests align with the position. Shortlisted applicants will be directed to apply to the Department of Electrical and Computer Engineering at North Carolina A&T State University.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact Ioannis Raptis
Electrical and Computer Engineering
North Carolina A&T State University
Greensboro, NC

Contact E-mail iraptis@ncat.edu