



## Ph.D. Position Overview & Application Guide Design Space Exploration for a Smart Built Environment

Graduate research assistant positions are available in [Dr. Maximilian E. Ororbia](#)'s research group in the [School of Environmental, Civil, Agricultural & Mechanical Engineering](#) at the [University of Georgia](#).

### Position Description

Motivated and determined individuals are invited to join our research group in developing innovative design methodologies that integrate artificial intelligence with advanced manufacturing, including robotic additive manufacturing for concrete 3D printing. Our work combines intelligent tools, next-generation materials, and cutting-edge technologies to transform how infrastructure is designed, assessed, and constructed. By coupling structural engineering principles with optimization frameworks and automated construction systems, these positions aim to advance resilient, sustainable, and data-informed solutions that address emerging challenges in engineering, architecture, and construction practice.

### Qualifications and Application

A Master's or Bachelor's degree in fields such as Civil, Structural Engineering, Architectural Engineering, Architecture, Mechanical Engineering, Computer Science/Engineering, or other related disciplines is required. Additional preferred skills include:

- Knowledge in structural design and analysis as well as optimization methods (i.e., continuous/discrete topology optimization).
- Experience with finite element & computational design software (e.g., Abaqus, Ansys, Rhino/Grasshopper).
- Proficiency in at least one programming language (e.g., Matlab, Python, C/C++).
- Understanding of artificial intelligence, reinforcement learning, digital twins, computer vision and sensing, as well as robotics.
- Familiarity in conducting experimental, laboratory research, in structural engineering, material science, and/or advanced manufacturing (e.g., robotic 3D printing).

To apply please review additional admission requirements and submit an application using the following link:

<https://engineering.uga.edu/prospective-students/graduate/>

**Deadline** for starting in the **Spring 2026 semester** is on **September 15, 2025**. In addition to submitting an application, interested individuals must contact Dr. Ororbia by email at [Maximilian.Ororbia@uga.edu](mailto:Maximilian.Ororbia@uga.edu) with the subject heading "UGA Graduate Student Inquiry – Design Exploration" and provide a CV with contact information for at least three references. Please in your email briefly explain research interests as they relate to the position and the qualifications you meet, providing supporting evidence (completed project reports, a portfolio, or publications) will significantly enhance the strength of your application.

### About University of Georgia

The [University of Georgia](#) offers a dynamic environment for Ph.D. students, combining rigorous academic training with cutting-edge research in infrastructure, sustainability, environmental resilience, and smart city development. Within the [College of Engineering](#), students collaborate closely with faculty on interdisciplinary projects supported by state-of-the-art laboratories, strong industry partnerships, and a collaborative campus culture. With 3,000+ engineering majors, 104 full-time faculty, and joint programs such as the School of Computing, UGA fosters a multidisciplinary community that drives innovation across fields. Located in the vibrant city of Athens, UGA provides both a high quality of life and a supportive graduate community.