

Doctoral Positions in Architectural Robotics and Design Computation

Texas Tech University College of Architecture invites applicants for funded Ph.D. positions in the area of Architectural Robotics and Design Computation. We seek highly motivated and qualified candidates to join our team and contribute to the development of innovative design methodologies, emerging materials, and technologies for the built environment. Positions will be part of The Land Use, Planning, Management, and Design (LPMD) Doctor of Philosophy (Ph.D.) interdisciplinary program at Texas Tech University. Applicants need to submit their applications to the LPMD portal provided below.

As a successful candidate, you will have the chance to work in a rapidly expanding robotic fabrication lab at TTU-HCoA and acquire expertise in a variety of subjects, such as Integrated Design-to-Production, Data-Driven Design, Artificial Intelligence in Design and Fabrication, Mixed-Reality Assisted Design, Fabrication and Assembly, Sub-Additive Manufacturing and Robotic 3D Printing, Human-Robot Collaboration, and Circular Design-to-Construction, among others. We encourage you to specify your field of interest and research objectives in application documents. You can expect to conduct original research and publish in leading venues.

We welcome applicants with interdisciplinary backgrounds and interests in architecture, industrial design, building technology, structural design and engineering, robotics, and related fields. Candidates should have a master's degree (or equivalent) in a relevant field by the time they start and should be able to demonstrate good written and oral communication skills.

SUBMISSION DEADLINE, FUNDING AND STARTING DATE

The application deadline is March 1, 2023. Review of applications will begin immediately and continue until the position is filled. Priorities will be given to applicants with high levels of qualifications and interdisciplinary experience, as well as background and interest in digital design and fabrication and related fields. Funding resources are available for partial to full support depending on qualifications and for those who can join the program on time for Fall 2023 semester. The starting date is August 2023.

SUBMISSION REQUIREMENTS

Application requirements listed on the LPMD application link include Transcripts, English Proficiency Test, Graduate Records, Resume(cv), and Description of Research Interest. All these documents need to be submitted to the LMPD platform. Additionally, to increase the chance of receiving funds, you are advised to consider the following guidelines when submitting your application:

- **Cover letter:** Applicants may add a cover letter to the first page of their CV and elaborate on the personal motivations, interests, and aspirations behind pursuing a Ph.D. degree and describe the qualifications. The applicant should explicitly specify the area of focus and elaborate on how the applicant's research proposal pertains to the larger disciplinary context and discourse. Cover letters should be concise and not more than 300 words on an A4 or letter-size paper.
- **Full CV:** The CV should contain comprehensive information about your academic and professional experience, as well as any pertinent record of publication.
- **Referees:** The last page of the CV may also include the names and contact information of two referents or recommenders. Also, mention in which capacity they are familiar with your qualifications and capabilities. Please do not enclose any letters of reference or recommendation in the proposal package. If needed, we will contact your referents.

- **Description of Research Interest:** (1000 to 1500 words, excluding bibliography & addendum)

I. Provisional Title: this should form a general introduction to the project, framing it conceptually and/or thematically. **II.** Abstract: Short summary (200-300) to be followed by 5 keywords. **III.** Question(s)/Hypothesis, Aims and Goals: Clearly and succinctly spell out the question(s) or hypothesis that drive your research and carefully articulate the aims and ambitions. **IV.** Preliminary outline: describe the overall intended structure of the Ph.D. research and explain how it will address your question(s)/hypothesis. **V.** Research Methodology: Introduce your research methodology and position it in a larger inter-disciplinary framework. **VI.** Research significance: Explain why this research is relevant and original and explain its overall contribution to the discourse of architecture. **VII.** Preliminary Bibliography: Brief literature and references cited and formatted with consistency. **VIII.** Addendum: (e.g., letter of Motivation, portfolio-type information) This can include anything you find relevant to giving a clear picture of yourself as a potential Ph.D. candidate – an example might be a published text or peer-reviewed publication.

- **Portfolio:** Please submit a neat, concise, and comprehensive portfolio, not exceeding 30 pages, including your work in academia and practice and your creative work, such as art, design-build, and prototyping projects. In group projects, please mention your role and specify your contribution.

TEXAS TECH UNIVERSITY, COLLEGE OF ARCHITECTURE

Texas Tech is one of the U.S. universities listed in the Very High Research Activity (R1) category, and TTU Huckabee College of Architecture is home to a range of cutting-edge robotic fabrication infrastructure, including several robotic arms equipped with subtractive/additive/formative end-effectors, augmented and virtual reality headsets and tools, as well as digital fabrication and 3D Printing facilities. These resources provide a unique opportunity for doctoral candidates to engage in research related to the use of robotic arms and mixed reality in design and construction. Doctoral candidates may also purchase additional equipment for their research projects. TTU-CoA robotic and fabrication labs are ideal places for doctoral candidates to develop and test new ideas and innovative workflows. Funding for this purpose may be available through grants provided by the main supervisor or other sources.

APPLICATION LINK AND CONTACT

Successful candidates will be expected to enroll in the Interdisciplinary Land Use, Planning, Management and Design (LPMD) Doctor of Philosophy (Ph.D.) program. To apply, please complete and submit your applications documents to the LPMD link provided below by clicking on APPLY NOW:

<https://www.depts.ttu.edu/gradschool/Programs/INDS/LPMD.php>

Available funded Ph.D. positions in Architectural Robotics and Design Computation will be under the auspices of the Graduate School of the College of Architecture and the (LPMD) Doctor of Philosophy (Ph.D.) program. Therefore, admitted applicants will follow and successfully gain the required credits offered by Graduate School. More general information about the application procedure and the program can be found on the same LMPD application link provided above. For further inquiries, applicants may contact Associate professor Dr. Sina Mostafavi as the main supervisor: sina.mostafavi@ttu.edu