



Multiple Ph.D. Positions focusing on real-time SHM, structural mechanics, and intelligent infrastructure at the University of South Carolina

Ph.D. Positions

Dr. Austin Downey in the Department of Mechanical Engineering at the University of South Carolina is looking for multiple Ph.D. students who wish to work in the fields of real-time structural health monitoring (SHM), structural mechanics, structural control, and intelligent infrastructure. Successful candidates must be excited to work in an interdisciplinary and international environment that will fuse concepts from solid mechanics, machine learning, real-time computing, prognostics, and multifunctional materials. All candidates must be able to work on projects with both theoretical and applied aspects. Ph.D. students are sought for various projects, including aspects of the following:

- algorithms and methodologies for structural prognostics in a real-time environment
- real-time monitoring and control of structures for aerospace and civil applications
- modeling and measurements of structures experiencing high-rate dynamics
- modeling and characterization of friction interfaces in dynamic environments
- multifunctional structural materials for aerospace and civil applications

Application

All positions start fall 2019. Applicants should have a background in mechanical, civil, electrical, or aerospace engineering. Candidates with strong backgrounds in coding (Python, C+, MATLAB), mechanics, electronics, and finite element modeling are encouraged to apply. Preferred applicants will have a Master of Science with published academic works. Additionally, those with U.S. citizenship or permanent residency are highly encouraged to apply. Positions are fully funded, including tuition fees and a competitive stipend. Additional funding will also be provided to support participation in conferences, workshops, and research visits to project partners. To apply, interested candidates are invited to send a detailed CV (including transcripts, honors, previous work, programming skills, publications, GRE scores, etc.) and contact information for two references to Dr. Austin Downey via email to adowney2@cec.sc.edu. Additional funding is available for exceptional students who have an engineering degree from a school in the Southeastern Conference (SEC), visit sec-engineering.org for more information.

University of South Carolina

The University of South Carolina in Columbia founded in 1801 and is the only institution in South Carolina to be classified as having “very high research activity” by the Carnegie Foundation for Advancement of Teaching, its highest rating. The university is also recognized for superior student experiences and is committed to developing flexible new models for college access and affordability. It has a total enrollment of 34,099 and is situated in downtown Columbia, the capital city of South Carolina.