ASSISTANT PROFESSORS
Mississippi State University ~ Bagley College of Engineering

Mississippi State University, through its Bagley College of Engineering, is working with the U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi to provide computational engineering and science research for a virtual prototyping environment that will lead the nation in revolutionizing how engineering and design of new products is performed. As part of this major effort, MSU is seeking two new tenure-track faculty at the rank of Assistant Professor.

Traditionally, the design/test process for new products has been based on historical experience, low-fidelity simulation, and extensive physical testing. This conventional approach is costly, slow, high-risk, and labor-intensive. Future needs require rapid development of new products that use advanced modeling and simulation capabilities, pushing the boundaries beyond what is currently possible. Today's demand for products that can function properly in multiple environmental conditions and be flexible enough to rapidly change to customer requirements requires a new design paradigm that will facilitate a manufacturer's ability to provide products for use anywhere in the world and adapt to local preferences. To accomplish this, new high performance computing (HPC) based processes and tools are needed for tradespace analysis of new designs and life cycle costs. In broad terms, the development of the virtual prototyping environment will be addressed in five areas – software architecture, operational requirements, models, product life cycle costs, and interfaces. These areas must works closely together in a truly interdisciplinary fashion, requiring faculty with a commitment to work beyond traditional disciplinary boundaries.

Applicants should have teaching and research interests that can address one (or preferably more) of these five areas of interest. Examples of areas of research interest for the five broad areas for virtual prototyping include, but are not limited to (1) mechanical vibrations/dynamics/vehicle dynamics, (2) advanced finite element methods (meshless methods, arbitrary Lagrangian-Eulerian formulations, etc.), (3) design optimization, (4) logistics/supply chain modeling, (5) modeling of environmental conditions on technology, (6) modeling manufacturing processes, and/or (7) big data analytics/visualization. It is expected that the successful candidates will have the desire and ability to teach courses at both the undergraduate level and graduate level. Preference will be given to individuals with a strong computational background in high performance computing, and a track record of interdisciplinary research collaboration. Appointment will be made in the appropriate academic department.

MSU (www.msstate.edu), a Carnegie Foundation High Research University, is a comprehensive public institution with more than 20,000 graduate and undergraduate students and approximately 1300 full-time faculty members, located in Starkville, Mississippi (visit.starkville.org). The Bagley College of Engineering has an approximate enrollment of 2900 undergraduate and 590 graduate students. It ranks 45th nationally in research expenditures. With over 100 tenure-track/tenured faculty members, the Bagley College of Engineering (www.bagley.msstate.edu) offers degree programs in eight different academic engineering departments.

Interested candidates must apply on-line at https://www.jobs.msstate.edu (search for positions in the Bagley College of Engineering). A PhD in an appropriate engineering discipline is required. Applicants must possess U.S. citizenship or permanent resident and must meet eligibility requirements for access to restricted information. Candidates are expected to have demonstrated the ability to conduct research at the highest level, and to have a record of, or the promise for, outstanding teaching and supervision of students. Applicant should submit a cover letter, curriculum vitae, names and contact information for at least three professional references, and a statement (limited to three pages) that describes research and educational interests. Candidates must also complete the on-line Personal Data Information Form.

For further information contact:
Dr. Roger King, Search Committee Chair; rking@cavs.msstate.edu; 662-325-2189.