Research Position Available in Structural Joints Simulation

The Ohio State University Simulation Innovation and Modeling Center (SIMCenter) is seeking highly motivated researchers to join our organization at all levels of experience. Applicants are expected to have experience applying computational methods to solve applied problems; working with industry; writing reports, presentations, technical publications, and proposals; and presenting technical material to sponsors or at conferences. The position is expected to be a two-year appointment. Successful candidates will be considered for long-term employment within SIMCenter or with academic departments.

Required Skills:

This posting is for Structural Joints Simulation. The primary focus may include metals such as steels, titanium alloys, aluminum alloys, or composites including metal matrix composites. The position requires a PhD and experience with one or more the following areas:

- Familiarity with nonlinear finite element methods and design optimization techniques
- Familiarity with damage mechanisms in brittle materials (e.g., polymer matrix composites), and/or ductile materials.
- Multiscale modeling of structural joints and preferable adhesives
- Familiarity with commercial FEM software packages (e.g., Abaqus, LS-Dyna), and the ability to incorporate user sub-routines for advanced applications
- Familiarity with multi-physics simulations
- Knowledge in materials processing physics (e.g., heat transfer, residual stress and distortion) and metallurgy (microstructure)

About SIMCenter:

The Simulation Innovation and Modeling Center, or SIMCenter, is a newly formed interdisciplinary research center for the virtual simulation and modeling of product performance and manufacturing processes in the College of Engineering. The SIMCenter researches and applies computer-aided engineering techniques to the design and manufacturing of advanced product and production concepts. Located in Smith Laboratory, the SIMCenter combines expertise from several College of Engineering departments, including mechanical, aerospace, electrical, industrial, materials science, computer science, and Integrated Systems and partnership with Ohio Supercomputer Center.

Detailed Job Description:

- Conducts applied and fundamental research in computational mechanics
- Develops and maintains competency in commercial computational packages
- Trains students and staff on the appropriate usage of simulation packages
- Assists in the development of sponsor reports, research articles, and presentations
- Assists in the development of research proposals and problem-solving tasks

For More Information:

Please apply via the jobs.osu.edu. Search for Job Opening Number 415463. Additionally, please send a cover letter and CV to simcenter@osu.edu with “Structural Joints” as the subject. First consideration of applications will begin in February of 2016. Anticipated start date is May of 2016.