OPEN POSITION
POSTDOCTORAL RESEARCHER
Computational Diagnostics and Inverse Mechanics

A *postdoctoral appointment* is available in the *Computational Diagnostics and Inverse Mechanics (CDIM)* research group under the supervision of Dr. John C. Brigham at the University of Pittsburgh Department of Civil and Environmental Engineering.

A highly motivated researcher is sought for this unique opportunity to develop existing research areas and help to build exciting new directions within the *CDIM* group. The *CDIM* group is actively involved in a number of projects covering a diverse array of applications, including shape and kinematic analysis of medical imaging data for diagnosis of cardiovascular disease, novel design concepts and optimal design strategies for smart material morphing structures, efficient and accurate computational nondestructive material characterization algorithms, and reduced-order modeling for simulating multi-physics behaviors.

A specific ongoing project involves development and implementation of shape-based methods to evaluate changes in the function of the human heart, including both direct statistical analysis as well as inverse estimation of heart wall mechanical properties. Another ongoing project is to develop complementary experimental and computational procedures to evaluate mechanical properties of cell/tissue constructs. The potential areas for further expansion include additional applications of inverse problems in mechanics of biological or artificial structures, with specifics depending upon the particular interests and capabilities of the candidate.

The successful applicant will:
- possess or be on track to complete a PhD in a relevant STEM discipline and have an excellent academic record.
- have expertise in computational mechanics and numerical methods.
- have experience in coding with one or more software languages (e.g., Python, C++, Fortran, and/or MATLAB).
- have a strong work ethic and time management skills along with the ability to work independently and within a multidisciplinary team as required.

Additional experience with pattern recognition and machine learning as well as numerical optimization is highly desirable. The candidate should have completed their Ph.D. prior to the start date of the position. Candidates from underrepresented minority groups and women are strongly encouraged to apply for this position.

The initial appointment will be for one year with the possibility of extension. The start date is flexible, with a preference for candidates capable of starting early in 2021 or *as soon as possible*. Review of applications will begin immediately and will continue until the position is filled.

Your application should include:
- Cover letter
- Curriculum Vitae
- 1-page statement of your career goals and how this position will help you achieve your goals
- Contact information for three references

Applications should be submitted at join.pitt.edu to faculty position 20005285.

For further information or questions about this position you may contact: Dr. John Brigham directly (brigham@pitt.edu).

The University of Pittsburgh is an Affirmative Action/ Equal Opportunity Employer and values equality of opportunity, human dignity and diversity, EOE, including disability/vets.