

## Postdoctoral Scholar of Computational Solid and Fracture Mechanics

The Mehmani Research Group is seeking to hire one Postdoctoral Scholar to develop novel computational methods for simulating fracture mechanics in porous materials. The prospective candidate will apply their research to important problems related to security and sustainability aspects of subsurface energy production, geologic CO<sub>2</sub> and H<sub>2</sub> storage, and energy conversion and storage devices such as batteries and fuel cells. They will also have the opportunity to mentor and work closely with graduate students, collaborate closely with experimentalists to identify knowledge gaps, and contribute to theory.

Candidates with very strong quantitative skills in one or more areas of computational solid or fracture mechanics, numerical methods (FVM, FEM, XFEM, DEM, phase field), programming (especially MATLAB), applied mathematics, and high-performance computing are sought for this position. A PhD in engineering, mathematics, geosciences, computer science, environmental science, physics, or a closely related field is required by the date of hire.

Applicants should upload: (1) a current CV; (2) a statement of research interest and experience in the context of the desired qualifications; and (3) a list of three references with their application. Review of applications will begin immediately and continue until the position is filled. This position is funded for one year from the date of hire, with a possibility of renewal upon satisfactory performance. The expected start date will be on or after August 2022.

Yashar Mehmani is an Assistant Professor in the Department of Energy and Mineral Engineering (EME) at The Pennsylvania State University ([link](#)). He is also a co-funded faculty in the Institutes of Energy and the Environment (IEE) ([link](#)). He received a BSc from Sharif University of Technology, Iran, followed by a PhD from the University of Texas at Austin. He was then a Postdoctoral Fellow and later a Research Scientist at the Energy Resources Engineering Department at Stanford University. His lab focuses on the fundamental physics of fluid flow and mechanical deformation of porous materials with a special emphasis on computing and scale translation. Further information about the lab are found at: [www.mehmaniresearchgroup.com](http://www.mehmaniresearchgroup.com).

The Pennsylvania State University's College of Earth and Mineral Sciences takes an active role in building talented, inclusive, and culturally competent workforce. We understand that our shared future is guided by basic principles of fairness, mutual respect, and commitment to each other. Applicants should provide evidence, either woven through their application or as a separate diversity statement, of a commitment to fostering diversity, equity, inclusive excellence, belonging, and engagement, which creates an inclusive environment in their workplace.

**Apply online at:** [https://psu.wd1.myworkdayjobs.com/PSU\\_Academic/job/University-Park-Campus/Postdoctoral-Scholar-of-Computational-Solid-and-Fracture-Mechanics\\_REQ\\_0000024697-1](https://psu.wd1.myworkdayjobs.com/PSU_Academic/job/University-Park-Campus/Postdoctoral-Scholar-of-Computational-Solid-and-Fracture-Mechanics_REQ_0000024697-1)

*To review the Annual Security Report which contains information about crime statistics and other safety and security matters and policies, please go to <https://police.psu.edu/annual-security-reports>, which will also explain how to request a paper copy of the Annual Security Report.*

*Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status.*

### [Penn State Covid-19 Vaccination or Testing Requirements](#)

Penn State is committed to the health of our local and global communities. As a condition of employment, all employees are required to comply with COVID-19 vaccination or testing requirements. Click on [Penn State Covid-19 Vaccination or Testing Requirements](#) to learn about the requirements as well as general COVID-19 information at Penn State.