

Applied Energy Division:

***Postdoctoral position focused on
wildfire mitigation and climate change adaptation***

The Applied Energy Division is dedicated to research and development that contributes to science, sustainability, SLAC's impact and relevance, the U.S. energy situation, and national competitiveness. SLAC's translational research program in sustainability and applied energy technologies includes a strategic focus on batteries and energy storage, the power grid, water desalination, solar energy, and advanced manufacturing technologies.

The Grid Integration, Systems and Mobility (GISMo) team, part of the Applied Energy Division, is a multidisciplinary research group exploring cross-cutting areas in power grid, building and ambient intelligence, and human mobility. In our research, we aim to increase the efficiency and reliability of the power grid with high penetration of distributed energy resources, improve our daily interactions with our environments, and answer key challenges in the electrification of transportation. Our research is motivated by the drive to integrate clean energy technology to enable 100% clean energy for all.

At GISMo you will apply your knowledge and understanding of data science, software development, development operations, and programming to research in the applied energy domain. You will work in collaboration with other postdocs, software developers and engineers, senior science and engineering staff, and students.

This is a one-year appointment, with a possible extension to a second year, available to begin immediately under the Grid Resilience and Intelligence Platform (GRIP) project, with focus on wildfire mitigation strategies. This position involves working in a multidisciplinary and a multi-industry collaboration, leveraging resilience analytics for wildfire mitigation and combining them with machine learning and artificial intelligence to ensure safe and equitable distribution of electrical power nationwide.

The project involves working with partners with complementary expertise, collaborations among electrical utilities, start-ups and large businesses, and interactions with electrical utility stakeholders. The candidate will focus on developing analytics to aid utilities in forecasting the probability of asset failure and integration of the analytics into GRIP. Additionally, a portion of the project will focus on developing machine-learning and optimization approaches to public safety power shut-off (PSPS) protocols for wildfire prevention.

Minimum Qualifications:

- Ph.D. in electrical or power systems engineering, or related fields.
- Experience using machine learning, statistical analysis, and optimization.
- Experience modeling and simulating electrical systems.
- Demonstrated ability not only to learn, but master, new techniques quickly.
- Proficient programming skills.
- Ability to work independently and in a team environment; and communicate effectively with a diverse population in both face-to-face and remote / virtual settings.
- Effective written and verbal communications skills.

Preferred Qualifications:

- Experience with GridLAB-D and Python.
- Interest in clean energy technology and energy systems.

What we offer you:

- A constant stream of new things to learn. We're always expanding into new areas, bringing in new projects and developing new technologies in the Applied Energy field.
- Growth and mentorship from exceptionally talented engineers and scientists from SLAC and Stanford University, plus an opportunity for you to mentor new students and staff.
- A mission-driven, stable, collaborative, highly interdisciplinary, and supportive work environment.

Interested candidates should submit a cover letter with CV to Alyona Teyber (aivanova@slac.stanford.edu).

August 2021