POSTDOCTORAL FELLOW

Coupling Decarbonization of the Power System with Advance Planning for Integrating Negative Emission Technologies

PI: Professor Michael Craig
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University of Michigan, Ann Arbor

Start date: June 1, 2022 (flexible)
Term: One year, full-time, with optional 1-year extension
Location: Ann Arbor, Michigan (flexible)
Salary: $60,000 (benefits eligible)

The ASSET Lab, based at the University of Michigan's School for Environment and Sustainability (SEAS), invites applications for a one-year Postdoctoral Research Fellowship on an NSF-funded two-year project. The fellow will develop and apply robust approaches to evaluate how CO_2 removal technologies can be integrated into a decarbonizing electric power system. The research will focus on two CO_2 removal technologies: bioenergy with carbon capture and sequestration (BECCS) and direct air capture and sequestration (DACS). These technologies are two of the most promising and potentially scalable negative emissions technologies, so could be crucial to limiting the global average temperature increase due to climate change to well below 2 °C. The postdoctoral fellow will integrate BECCS and DACS into large-scale power system optimization models to explore interactions between the two technologies and the power system.

The successful candidate will join a cooperative group of postdoctoral, PhD, MS, and undergraduate researchers in Dr. Craig's ASSET Lab. The lab and SEAS offer numerous professional development opportunities, including collaboration on other research projects; mentorship of undergraduate and graduate students; and leadership of other research projects. These opportunities will be tailored to the postdoctoral fellow's career goals.

Applicants should hold a PhD in energy systems, electrical engineering, environmental engineering, risk analysis, or a similar field. Required and desired training, experience, knowledge, and skills are:
- Formal training and experience with optimization is required
- Formal training and experience with one or more programming languages is required
- Strong written and oral communication skills are required
- Knowledge of BECCS, DACS, risk analysis, and/or technoeconomic analysis is preferred

To apply, please submit the following in a single PDF file by March 15, 2022 to Michael Craig at mtcraig@umich.edu. Applications will be considered on a rolling basis until the position is filled.
- Cover letter describing your relevant experience and scholarly interests and preferred start date
- Curriculum vitae
- Relevant publications
- 2-3 references (name, title, affiliation, email address, and phone number) (letters are not required with your initial application)