

PhD Student, Modeling China's Decarbonization Pathways, UC San Diego

Prof. Michael Davidson in the Department of Mechanical and Aerospace Engineering (MAE) and the School of Global Policy and Strategy (GPS) at UC San Diego is seeking to recruit an MAE PhD student to join the Davidson Lab to model China's decarbonization pathways starting in Fall 2022.

The interdisciplinary Davidson Lab applies methods from power systems optimization, geospatial analysis, and the social sciences to study how power grid institutions and infrastructures must evolve in the real world to address climate change. Members of the lab have ongoing projects in renewable resource assessment, carbon neutral power systems planning and operation, electricity market design, and low-carbon transitions in political institutions and state-owned enterprises. Regions of focus include China, India, the western U.S., and Vietnam. Read more about the team here: <https://mdavidson.org/about/>

The PhD student will join an exciting community of Power and Energy Systems at the Jacobs School of Engineering (<https://power-energy.eng.ucsd.edu/>), engage with diverse China experts at the 21st Century China Center (<https://china.ucsd.edu/>), and participate in a highly interdisciplinary campus dedicated to exploring the intersection of STEM and public policy through, e.g., the Deep Decarbonization Initiative (<https://deepdecarbon.ucsd.edu/>) and solution-driven technical expertise at GPS (<https://gps.ucsd.edu/>).

Application deadline: December 15, 2021

Qualifications and Preferred Academic Background

Applicants with strong quantitative and programming backgrounds, an interest in policy applications, and familiarity with China are particularly encouraged to apply. Prior knowledge of energy systems, optimization modeling languages (e.g., AMPL, GAMS, Julia/JuMP, Python/Pyomo), and/or geospatial analysis is preferred but not required.

To Apply: Please submit your application materials by the deadline to the MAE PhD program, selecting Energy and indicating your interest in working with Prof. Davidson.

Applicants are highly encouraged to contact Prof. Davidson (mrdavidson AT ucsd.edu) prior to submitting their application. Please include a) your academic CV, b) a brief summary of research experience and skills, and c) how would you contribute to this project and the lab.

A PhD application workshop for Power and Energy Systems was held on November 1, 2021, and a video recording and slides of the event are available at:

<https://power-energy.eng.ucsd.edu/resources#h.aon0no2jb76a>

Please apply before the deadline for full financial consideration including university and department-level fellowships. Students are expected to receive full funding through a combination of fellowships, research grants, and teaching awards.

Women and members of historically underrepresented groups are especially encouraged to apply.