Metamorphosis of the Electric Grid in Hawaiʻi:
Merging Intelligence, Data, and Energy to Reach 100% Renewable Energy by 2045

Research at the intersection of power systems, intelligent systems, and communication is critical to make innovative solutions that will be required to meet the human needs for sustainable energy, particularly in Hawaiʻi, with its goal of using 100% renewable energy by 2045.

The Renewable Energy Design Lab (REDLab) is poised to develop the tools needed to advance the understanding of renewable energy systems with the goal of stable and reliable power generation.

Tuesday, November 10
11:30am - 12:30pm
Hamilton Library, Room 301
Admission Free | Refreshments Provided

One current project, funded by the National Science Foundation, focuses on grid optimization architecture, bridging data science, artificial intelligence, power systems, and economics to tackle ongoing and anticipated issues in the electric network.

Dr. Ghorbani will discuss this project and other research covering all the aspects of renewable energy: meeting the load through generation and storage, the use of demand response, effects of the energy market, and linkage of energy and data.

Dr. Reza Ghorbani is an Associate Professor in the Department of Mechanical Engineering and the Director of the Renewable Energy Design Laboratory (REDLab) at the University of Hawaiʻi at Mānoa. Dr. Ghorbani received is undergraduate and graduate degrees from the Department of Aerospace Engineering at Sharif University of Technology in Tehran, Iran, and his PhD in Mechanical Engineering from the University of Manitoba. His current research interests include power systems and smart grid technologies, as well as the design of hybrid power systems, energy management methodologies, and large-scale renewable power integration to the grid.

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