Destenie Nock

Assistant Professor at Carnegie Mellon University

Pittsburgh, PA, US

Destenie Nock uses mathematical modeling tools to address societal problems related to sustainability planning, energy policy and equity.

Biography

Dr. Destenie Nock is an Assistant Professor of Engineering & Public Policy and Civil & Environmental Engineering. She joins CMU having received her Ph.D. in 2019 from the University of Massachusetts Amherst in Industrial Engineering and Operations Research. There, she performed energy systems modeling and analysis in both New England and Sub-Saharan Africa, using multi-criteria decision analysis and applied optimization to better equip policy makers to understand energy planning options. In her previous work she assessed the sustainability of different future scenarios for electricity generation in the New England region. Nock built models that analyzed how changes in the power plants used to supply energy would impact the job creation, environmental health and economic viability of various communities. Using these techniques, she was able to identify the trade-offs between different future electricity scenarios in terms of their sustainability for the region. She applied a similar systems approach to Sub-Saharan Africa by developing an electricity planning tool, which incorporated stakeholder preferences for equality and makes recommendations for national electrification planning. Nock?s broad research interests are focused around using mathematical modeling tools to address societal problems related to sustainability planning, energy policy, equity, and engineering for social good. She brings to CMU a breadth of professional experience, having worked in industry, national labs, and government settings on issues related to energy systems.

Industry Expertise

Energy, Food Distribution, Environmental Services, Public Policy

Areas of Expertise

Electricity and Food Systems, Decision Analysis, Energy Transitions, Electrical Infrastructure, Engineering for Social Good, Applied Optimization, Data Science

Education

University of Massachusetts Amherst

Ph.D. Industrial Engineering and Operations Research

Queen's University Belfast

M.S. Leadership for Sustainable Development

North Carolina A&T University

B.S. Electrical Engineering & Applied Math