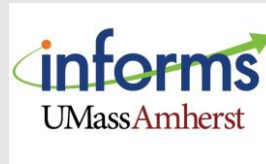


Friday, March 15

11:00 AM – 12:15 PM (EST)

@Isenberg Room N145

Hosted by



**The Energy
Transition Institute
(ETI) at UMass
Amherst**

*The Chapter thanks the Isenberg School of
Management for supporting this event.*

Optimization-Based Solutions for the Design and Operations of Sustainable Electric Power Systems

Rising population growth rates, depleting fuel sources, environmental issues, and economic developments have substantially increased the importance of sustainable energy planning. With the generation and distribution of energy resources becoming more complex, there is an ever-growing need for the applications of mathematical optimization in the energy industry. This seminar will focus on recent research advancements in the development of optimization-based solutions for the design and operations of sustainable electric power systems. There will be a special emphasis on the methodologies for decision-making under uncertainty, facility location, and network design. Firstly, we will delve into an analysis of the technical and economic impacts of control mechanisms facilitated by smart grid technologies. Secondly, we will explore solutions addressing the persistent challenge of energy poverty, with a specific focus on strategies for rural electrification.



Ayse Selin Kocaman, PhD
Associate Professor of Industrial
Engineering

Ayse Selin Kocaman is an Associate Professor in the Industrial Engineering Department at Bilkent University and serves as a visiting scholar at the MIT Energy Initiative. She holds a B.Sc. degree in Industrial Engineering from Bogazici University, an M.Sc. degree in Operations Research, and a Ph.D. degree in Sustainable Energy, both from Columbia University. During her time at Columbia University, she was a member of the Sustainable Engineering Lab. Her research interests include energy infrastructure design and planning, optimization of electric power systems, sustainable energy resources, and sustainable development. She is currently recognized as an American Association of University Women Fellow. Notable awards she has received include: the Distinguished Young Scientist (BAGEP) Award from the Science Academy of Turkey, the Scientific and Technological Research Council of Turkey (TUBITAK) Career Award, and the Production and Operations Management Society (POMS) College of Sustainable Operations Ph.D. Proposal Award.



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