

Distinguished Lectures

Spring 2026



Dr. C. Lindsay Anderson

Professor & Chair

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Cornell University,

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Cornell Atkinson Center for Sustainability,

House Professor and Dean, William Keeton House

From Targets to Implementation: Aligning Decarbonization Policy with Grid Operations

Monday, April 13, 2026

Reception with Refreshments: 10:30 a.m.

Lecture: 11:00 a.m. - 12:00 noon

Computer Science Building 130

Spectral Clustering to Enable Distributed Control in Low-Inertia Power Grids

Monday, April 13, 2026

Lecture: 4:00 - 5:00 p.m.

Powerhouse Energy Campus (1st Floor Classroom)

Sponsored by Colorado State University's

Information Science and Technology Center (ISTeC)

In conjunction with the Energy Institute, Department of Computer Science and Department of Electrical and Computer Engineering Seminar Series

Abstracts

From Targets to Implementation: Aligning Decarbonization Policy with Grid Operations

Decarbonization policies are essential for driving the clean energy transition, but they don't always align with the operational realities of power systems. In this talk, I will examine the risks that arise when policies and operations diverge, and share ideas on how updating these policies could lead to more reliable, resilient, and effective energy systems. The goal is to show how attention to operational details can strengthen—not undermine—our path toward a sustainable future.

Spectral Clustering to Enable Distributed Control in Low-Inertia Power Grids

The rapid growth of distributed energy resources will soon create more control points than can be coordinated through centralized optimization on operational time scales. This motivates the development of distributed control strategies that can manage disturbances locally while preserving overall system stability. A key step in designing such algorithms is identifying network partitions that are well-suited to decentralized control. In this talk, I will present an approach based on spectral clustering applied to structure-preserving dynamic graph representations of the power system. This method reveals sub-graphs that can effectively contain and mitigate disturbances, offering a scalable pathway toward distributed control in future grids.

Speaker Biography

Dr. Catherine (Lindsay) Anderson is Professor and Chair of the Department of Biological and Environmental Engineering at Cornell University. Her research focuses on energy system decarbonization, situated at the interface of environmental and systems engineering, electric power systems, applied optimization, and decision science. She is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE) and a Senior Fellow of the Cornell Atkinson Center for Sustainability. Lindsay previously served as the interim Director of the Cornell Energy Systems Institute, and as the Kathy Dwyer Marble and Curt Marble Faculty Director for Energy with the Cornell Atkinson Center for Sustainability.

Dr. Anderson's work has been recognized with several awards, including the Energy Systems Integration Group Award of Excellence for Contributions to Energy Systems Optimization in 2021, the Cornell College of Engineering Award for Research Excellence in 2016, and the National Science Foundation CAREER Award in 2015. Beyond her scholarship, she is engaged in shaping clean energy legislation in New York State. She serves on the environmental advisory committee for the New York Independent System Operator, the electric grid operator for the state, where she brings a research-informed perspective to policy and planning.

Dr. Anderson has also played a leading role in building scholarly communities. She co-leads the Electric Energy Systems track at the Hawaii International Conference on System Sciences, serving as co-chair since 2019. She was selected as an Ivy+ Provost Leadership Fellow in the inaugural cohort through the Faculty Advancement Network. Dr. Anderson received a B.Sc. (Engineering) and an M.S. in Environmental Engineering from the University of Guelph in Canada, and a Ph.D. in Applied Mathematics from the University of Western Ontario in Canada.

ISTeC (Information Science and Technology Center) is a university-wide organization for promoting, facilitating, and enhancing CSU's research, education, and outreach activities pertaining to the design and innovative application of computer, communication, and information systems.

For more information please see ISTeC.ColoState.edu.

To arrange a meeting with the speaker, please contact Prof. Tim Hansen <tim.hansen@colostate.edu> or Prof. Zongjie Wang <zongjie.wang@colostate.edu>.