CREW Center for Research and Education in Wind

CREW Seminar Series: Spring 2011

Control of Wind Transients in Small Island Power Systems

Abstract

Island power system operators see renewable energy resources as a means to decrease fuel consumption and meet environmental goals. For example, the US military has identified renewables as one method to reduce fuel consumed in forward operating bases. However, displacing significant fuel typically requires high instantaneous power penetration by renewable resources. The high transient ramp rates of these resources present challenges for all power systems, and may cause significant voltage and frequency transients in small island systems.

Zimmerle will share some of CSU's recent work integrating high-penetration renewables into island systems, including an overview of small system, penetration metrics, and recent simulation results.

By **Daniel Zimmerle** from **Colorado State University**

On **Monday, February 28, 2011,** at **2:00pm**

Natural Environmental Sciences Building, Room B101

Colorado State University

Refreshments will be available at 1:50pm

Daniel Zimmerle is an Adjunct Professor of Mechanical Engineering at Colorado State University and Power Systems R&D Manager at the Engines and Energy Conversion Laboratory, where he manages the InteGrid power research laboratory. InteGrid provides a foundation for advanced research in power systems, emphasizing smart grid controls, electrified transportation, and renewable energy integration. Zimmerle's recent research includes work on microgrid controls, vehicle-grid interaction, distributed generation, and integration of high-penetration renewable generation. Prior to CSU, Zimmerle headed a small consulting practice and served the Chief Operating Officer at Spirae, Inc.

Zimmerle has also served as a division general manager and managed several R&D laboratories for Hewlett Packard and Agilent Technologies, including internationally diverse organizations with personnel in the US, Ireland, Singapore and other countries. He accumulated twenty years of experience in research, development and business management across CAD, consumer imaging, energy systems and test equipment businesses. He holds a BSME and MSME from North Dakota State University.

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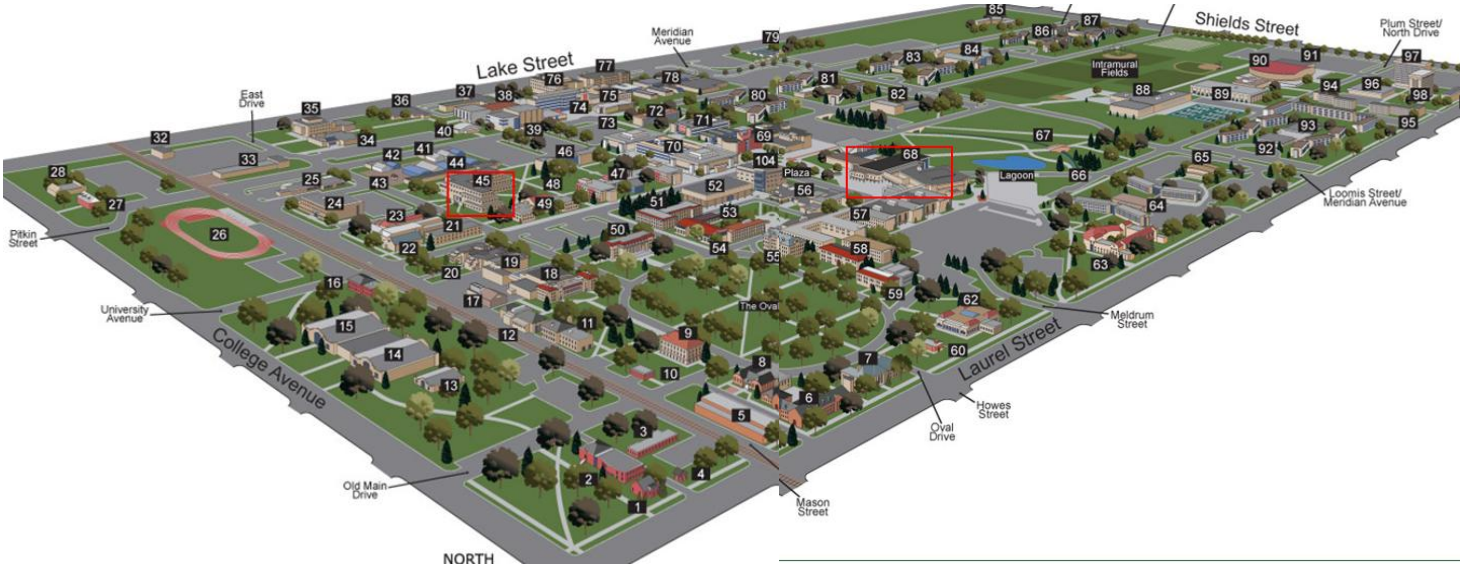
Colorado State University Campus
Fort Collins, CO

Building 45 is the 'Natural and Environmental Sciences' building



Directions to suggested parking, i.e., Directions to the **Lory Student Center (building 68)**

From Interstate 25, exit at Prospect Road (#268). Travel west on Prospect approximately 4 miles to College Avenue (passing major intersections at Timberline Road and Lemay Avenue). At College Avenue, turn right (north). Continue north approximately three-quarters of a mile to Laurel Street, turn left (west), and travel west three-quarters of a mile to Meldrum Street (the second stop light), and turn left into the Lory Student Center parking lot.

- **Parking at a meter** - The Lory Student Center parking lot includes metered spaces that are enforced from 7:30a.m to 4:00pm., Monday through Friday, except for University Holidays and semester breaks. Visitor permits are not valid at meters during enforced hours - the posted fee must be paid during all enforced hours.
- **"A" zone parking** - The "A" zone spaces require a permit to park from 7:30 a.m. to 4:00 p.m. Monday through Friday (except for specially signed portions of "A" zones which are enforced until 7:00p.m.), except for University Holidays and semester breaks. Information on parking services and/or purchasing a visitor permit is available at: http://parking.colostate.edu/index.asp?url=Others

Looking forward to your attendance!

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