CREW Center for Research and Education in Wind

CREW Seminar Series: Fall 2011

Wake Effect and Sudden Wind Gust have on Wind Turbine Durability

Abstract

Mitsubishi has over 3GW of installed wind turbines in the US. Besides being OEM, we also provide Operation and Maintenance services for all wind turbines. In order for us to perform our job efficiently, we constantly strive to learn more the external factors that affect our machines. Understand the characteristics of the wind blowing over the wind farm have proven to be critical in enhancing the wind turbines' durability. We studied this effect by using Lidar Doppler system to monitor wind conditions continuously for one year. The data showed apparent appearance of nocturnal wind blowing due to low level jet stream. This presentation will show this kind of phenomena and related high stress conditions occurred to the wind turbines in an actual wind field.

By **Yuji Yatomi** from **Mitsubishi Heavy Industries Ltd.**

On **Friday, December 9, 2011,** at **11:00 am**

In **Room ECCS 1B14**

(CAETE studio, Engineering Center, University of Colorado at Boulder)

Refreshments will be available at 10:50pm

While you are encouraged to attend in person, the meeting is also broadcast live via:

https://www3.gotomeeting.com/join/790484574

Mr. Yuji Yatomi is currently the General Manager of Wind Turbine Project & Service Department of Mitsubishi Heavy Industries, Ltd. (MHI) in Japan after his 7 years working in the Los Angeles office of Mitsubishi Power Systems Americas in US. Before returning to Japan, Mr. Yatomi was the Director of Engineering for Mitsubishi Power Systems of Americas (MPSA). He originally started with MHI's wind turbine business as a Blade and Mechanical Designer for Mojave Wind Project, CA in 1988. In the almost 25 years with MHI, Mr. Yatomi has also worked under different design functions for steam turbine plants and gearbox design within MHI. He is responsible for the introduction of various technologies and techniques into MHI wind turbines and improve its reliability and durability. Mr. Yatomi has a Master degree in mechanical engineering from Kyushu University in Japan.

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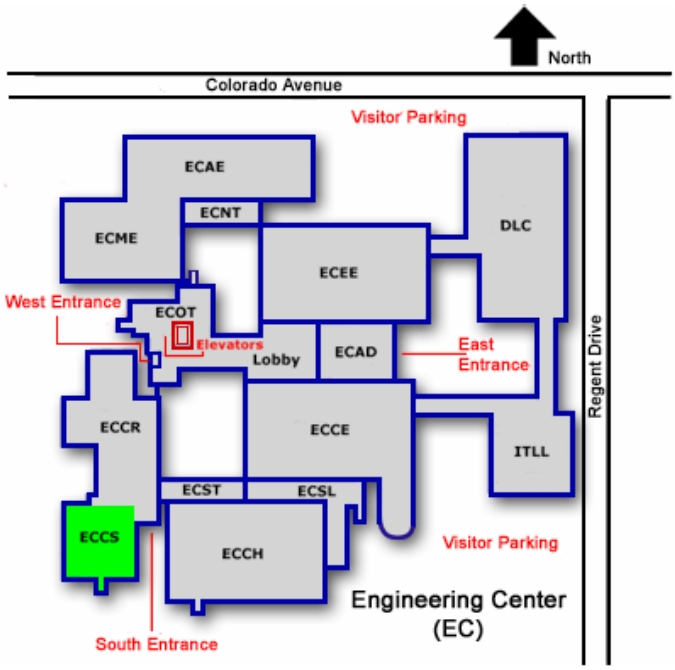
How to get to the CU-Boulder Engineering Center

From 28th Street (Hwy 36), go west on Colorado Ave., which leads into the University. You will see the Engineering Center on the left, one block further along Colorado Ave.
Parking is available at visitor parking lots and nearby meters.



Room **ECCS 1B14** is located in the 1st basement (courtyard level) of the Computer Science Wing (ECCS).

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