

Thursday, Nov 20, 2008

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IEEE's OEB Industry Applications Society



Subject: **Power Quality**

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Speaker: Rakan El-Mahayni, Team Leader, Eaton Corporation

Date: Thursday, November 20, 2008

Time: No-host social at 5:30 pm; Presentation at 6:15pm; Dinner at 7:15 pm; Presentation continues at 8:00 pm; Adjourn by 9:00 pm.

Place: Marie Callender's Restaurant - The Garden Room; 2090 Diamond Blvd in Concord (near the Concord Hilton Hotel). Call 925-827-4930 if you need directions.

RSVP: Please make reservations by June 18, by contacting Gregg Boltz at email: gboltz@brwncald.com or telephone: (925) 210-2571

Cost: The cost of dinner is \$20 for IEEE members; \$25 for non-members.

Power Quality

The demand for increased reliability and the heightened sensitivity of electronic loads has forced the modern facility operations to take a new approach. A successful strategy requires an understanding of power quality issues and knowledge of available solutions. This presentation will begin with an overview of the power quality issues impacting facility operations, especially harmonics, which are often difficult to understand. In addition, the presentation will demonstrate the detrimental effects of several common power quality problems, as well as the improvements to be expected from different types of mitigating equipment. The following power quality issues will be discussed during the presentation:

- Grounding and Sensitive Electronic Equipment
- Multi Cycle Voltage Variations
- Surges and Transients
- Harmonics and IEEE 519 considerations

About the Speaker:

Rakan El-Mahayni is currently working with Eaton Corporation in Livermore as a Team Leader for the Power System Engineering (PSE) Division in the Northwest. The PSE division provides power system studies such as short circuit, coordination, arc flash, grounding and harmonic analyses for electrical power distribution systems.

In 1998, after graduating from University of Damascus, Syria from the Electrical Power Engineering Division, he joined Siemens AG as a Testing and Commissioning Engineer for the 400 KV power interconnection projects between the Middle East and Europe. In 2002 he joined Eaton Corporation as a Field Service Engineer conducting start up, testing and maintenance for medium and low voltage systems. In 2006, he graduated from California State University, Sacramento with a Masters Degree in Electrical Power Engineering.

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