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Serving IEEE Members of South Central Wisconsin

September 2010

Why Materials Degradation Is Different In Nuclear Systems

Date: September 16, 2010

Time: 11:30am to 01:00pm

Speaker: Todd Allen, Associate Professor, Dept. of Eng. Physics, UW Madison

Agenda: Informal networking will begin at 11:30am.

Dr. Allen's presentation will begin at 12:00 noon.

Location: Rocky Rococo's Pizza

7952 Tree Lane (Beltline Hwy. at Mineral Pt. Rd.)

Madison, WI 53717 ... telephone: 608-829-1444



Menu: Pizza buffet, salad, and pop will be available: \$5 for IEEE members, \$10 for non-members.

RSVP: by September 13 to Charles Gervasi (cj@cgersvasi.com). Register online at:

http://meetings.vtools.ieee.org/meeting_view/list_meeting/2173

Non-member guests are always welcome!

Abstract

Even though similar materials are used and the temperatures and applied stresses to which materials are subjected in a nuclear system are similar to those in a fossil fired energy plant, the materials degradation is dramatically different. Degradation happens faster in nuclear systems and unique degradation modes like void swelling and irradiation assisted stress corrosion cracking occur in nuclear systems. All this can be tied to the displacement of atoms by high-energy neutrons from fission. This talk will explain the degradation that occurs in a nuclear system, why it is unique, and how it is mitigated.

Biography

Prof. Allen is an Associate Professor in the Dept. of Engineering Physics at the University of Wisconsin – Madison since 2003. Prof. Allen's research expertise is in the area of materials related issues in nuclear reactors, specifically radiation damage and corrosion. Dr. Allen has established the Extreme Environment Laboratory equipped with facilities for a wide array of high temperature studies as well as the ion beam laboratory for radiation damage studies. Dr. Allen is also the Scientific Director for the Advanced Test Reactor National Scientific User Facility at Idaho National Laboratory, a position that he holds in conjunction with his faculty position at the University of Wisconsin.

IEEE Entrepreneurs & Consultants Network (ECN), Madison Section - Networking Meeting

Date: October 7, 2010

Time: 11:30am to 1:00pm

Purpose: Networking for projects, needs, resources. Special topics vary.

Agenda: Informal networking will begin at 11:30am.

Location: Madison Area Technical College (MATC, Truax Campus)

3550 Anderson Street, Room 141A

Madison, WI 53704 ... Telephone: 608-246-6100

Parking: In the gated lot (click logo for parking map).



At gate, click speaker phone and tell attendant that you are going to the IEEE meeting.

Process: Members are encouraged to make introductions, describe their consulting or entrepreneurial endeavors, and make requests for: contacts in target companies, needs (e.g. lab space, special machinery, etc.), and human resources. Bring your elevator speech and rolodex!

RSVP: Tim Chapman (PrettyGoodGUIs@TrueNym.NET)

Monthly Section Meetings

The third Thursday of Jan.-May and Sep.-Dec. is reserved for a meeting to provide recent research, developments, trends and/or innovations in one of our membership's technical areas.

Section Meeting Schedule for 2010

(schedule subject to change)



(past) **January 28**, Wind Power Half-Day Seminar.

(past) **February 18**, Growing Your Business through Government Sales.

(past) **March 18**, Why Doesn't My Electricity Come from the Sun? Future Materials for Harnessing Solar Energy.

(past) **April 15**, Building Accessibility Directly into the Global Internet: Making the Internet Easier to Use for People of All Ages and Abilities.

(past) **May 5**, Sustainable Thinking in an Age of Energy Challenges.

(past) **August 19**, Magnetic Reversal at the Nanoscale.

September 16, Why Materials Degradation Is Different In Nuclear Systems.

October 21, (talk being planned).

November 18, (talk being planned).

December 16, e-Business and Social Networks: Tapping Dynamic Niche Markets Using Language-Action and Artificial Intelligence.

Monthly Networking Meetings

The first Thursday of every month is reserved for a meeting to provide networking opportunities for members who are consultants or entrepreneurs. Bring your elevator speech and rolodex!

Networking Meeting Schedule for 2010

(schedule subject to change)

(past) **January 7**, Growing Your Business through Government Sales, plus Networking meeting.

(past) **February 4**, Tour of MATC Truax campus, plus Networking meeting.

(past) **March 4**, Networking meeting.

(past) **April 1**, Overview of ECN LinkedIn Group, plus Networking meeting.

(past) **May 6**, Networking meeting.

(past) **June 3**, The Process of Networking, plus Networking meeting.

(past) **July 1**, Networking meeting.

(past) **August 5**, Networking meeting.

September 2, Networking meeting.

October 7, Networking meeting.

November 4, Networking meeting.

December 2, Networking meeting.

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Those interested in upgrading their IEEE membership level should send their resumes or other information showing five years of significant performance in an IEEE-designated field to Charles J Gervasi (cj@cgervasi.com). The Madison Section board will attempt find Senior IEEE members knowledgeable in the applicant's area of practice who may be able to provide references. You are invited to attend the informal networking portion of the monthly Section meetings (starting at 11:30am) to meet the Section Board members and discuss intentions.

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Our members have professional interests in computers, power engineering, signal processing, communications, industry applications and a number of other technical fields

For more information, contact Mitch Bradt at 608-263-1085 or bradt@wisc.edu.

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