



IEEE NEWS FOR MARCH 2010

Jacob Z. Schanker, P.E., Newsletter Chair
Rochester IEEE home page at: <http://rochester.r1.ieee.org>

(Always check the web PDF edition for late changes and additions)

Rochester Section Meeting - Tuesday, March 2, 2010

The next Rochester Section business meeting is on Tuesday, March 2, 2010 at Noon, at the Shanghai Restaurant, 2920 West Henrietta Road, just south of the intersection with Brighton-Henrietta Town Line Road.

Any IEEE member is welcome to attend and to participate, or just to observe. Lunch is only \$3 for IEEE members. No reservation or RSVP is needed, just show up.

IEEE Technology Management Council

Topic: Innovation as a Business Design Challenge

Speaker: Robert Wolcott, Kellogg School of Management, Northwestern University

Date: Thursday, March 4, 2010

Time: 5:30-7:30PM

Place: RIT Thomas Gosnell Bldg (08) Room A300

Cost: \$15 IEEE/PDMA members, \$20 non-members, \$5 students

Deadline: Register by 3/1/2010

Registration: <http://www.wnypdma.org/events>

Further info: tr.pian@ieee.org or george.gibson@xerox.com

Dr. Robert C. Wolcott, founder and executive director of the Kellogg Innovation Network (www.kinglobal.org), a faculty member of the Kellogg School of Management, Northwestern University, will present a model developed in collaboration with his colleagues at the Kellogg School known as the Innovation Radar.

Featured in one of MIT Sloan Management Review's most popular articles of the past decade, the Radar is used by corporations and governments worldwide to measure the level of innovation performance across all of the ways companies do business. It also provides a powerful bridge between a company's strategy and its innovation portfolio of investments. The Innovation Radar features in Dr. Wolcott's recently released book from McGraw-Hill, "Grow From Within: Mastering Corporate Entrepreneurship and Innovation".

2010 Rochester Section Joint Chapters Meeting Wed., March 31

The Rochester Section of the IEEE will be hosting a joint meeting for all IEEE society chapters on March 31, 2010. The meeting is open to the general public as well as IEEE members. The meeting will feature several technical presentations from different technical society chapters. Don't miss this great opportunity to meet and network with people from all engineering disciplines and to learn more about the activities of the different IEEE society chapters in the Rochester area.

The meeting will be held at the RIT Inn & Conference Center located at 5257 W. Henrietta Road, Henrietta, NY. The technical sessions are free to attend. Reservations are required to attend the dinner and feature presentation (\$20 for IEEE members, \$25 for non-members, and \$10 for IEEE student members).

Further details are found in the full-page announcement in this issue, as well as in the individual society chapter announcements here. More current details and on-line registration may be found at: <http://www.r1.ieee.org/~roch/>

IEEE Electromagnetic Compatibility (EMC) and Product Safety Engineer (PSE) Joint Chapters

Title: Best PWBA Design Practices for Achieving Optimal EMC, Signal Integrity, and Power Integrity

Speaker: James Herrmann is a Principal Engineer and Managing Partner at AppliedLogix, LLC.

Date: Wednesday, March 31, 2010,

Location: At the Joint Chapters Meeting (see announcement) RIT Inn and Conference Center

Abstract: Digital electronics based product development has never been more exciting or more challenging. As semiconductor manufacturers press forward and fulfill Moore's Law, product development teams are integrating increasingly complex, high clock rate silicon devices into all manner of consumer, commercial, and industrial products. While such processing power provides the design team with unprecedented capabilities, it also creates significant design implementation challenges. Higher clock rate devices infer higher internal transient current demands. Correspondingly, fast edge rate external logic signaling places more energy in higher harmonics beyond the fundamental frequency. Without proper design consideration, these attributes of high speed devices will most often result in a failed product development as characterized by excessive EMI and / or unreliable operation. This presentation will highlight proven design tools and techniques, applied throughout the PWBA design and layout phase, to effectively manage these challenges. Actual PWBA design examples will be included to reinforce and illuminate best design practices as well as common mistakes. The discussion will also highlight and

demonstrate the strengths of modern circuit (e.g., Spice) and EM (e.g., Hyperlynx) simulation tools.

Biography: Mr. Jim Herrmann is a Principal Engineer and Managing Partner at AppliedLogix, LLC. He has 20+ years of industry experience designing and commercializing embedded electronics subsystems. He has developed, and continues to refine, a rigorous yet lean PWBA design methodology. This quantitative board design methodology has consistently delivered first-pass success as characterized by reliable operation and robust EMC characteristics. Product applications have ranged across a broad spectrum, from very high-performance pulsed-radar signal processing to battery-operated wireless devices.

Mr. Herrmann began his engineering career at Eastman Kodak, where he worked for 14 years as a design engineer and team leader. He then moved on to Xerox, where he was a hardware design manager within their wide-format printer division. Mr. Herrmann was a co-founder and VP of Engineering at a prominent local high-tech startup (InSciTek / Allworx), acquired by Paetec in 2007. During his 8-year tenure there, Mr. Herrmann led the consulting engineering group and provided digital system design engineering expertise to numerous OEM customers.

Mr. Herrmann received his BSEE degree from the State University of New York at Buffalo (1981), and his MSEE degree from the University of Rochester (1991).

On May 11, the group will again meet to hear the IEEE EMC Society Distinguished Lecturer Mark Steffka.

Title: Conducted Emissions, Power Supplies, and LISNs

Speaker: Mark Steffka, EMC Technical Specialist, GM Powertrain, Milford, Michigan

Date: Tuesday, May 11, 2010

Location: RIT, One Lomb Memorial Drive, Rochester, NY 14623

Abstract: With the proliferation of digital methods from data communication to machine and equipment control, as well as the increasing use of switched mode power supplies (SMPS), conducted emissions are becoming more of a concern. This topic discusses the physics involved in conducted emissions, how to measure those emissions, the trade-offs in power supply issues versus EMC, and effective filtering methods. Diagnostic methods to identify the nature and source of conducted emissions are presented as well as corrective actions to solve those problems are identified.

Biography: Mark Steffka, B.S.E., M.S., is with the Electromagnetic Compatibility (EMC) Engineering Group of General Motors (GM) Powertrain and is a faculty member of two universities. He is an adjunct lecturer at the University of Michigan-Dearborn, in the Electrical and Computer Engineering (ECE) department for the undergraduate and graduate classes on EMC. He is an adjunct professor at the University of Detroit – Mercy and teaches undergraduate and graduate engineering courses on EMC. He is a member of Institute of Electrical and Electronics Engineers (IEEE), has served as an

invited session chair for the IEEE EMC Symposium. His publications have covered topics on EMC and RFI. He is a co-author of the book “Automotive Electromagnetic Compatibility”.

Engineering in Medicine & Biology Society Chapter News

Past Events:

On Jan. 27, the Rochester EMB Society hosted the Rochester Engineering Explorer Post. The event included a hands-on lab demonstration and a presentation providing an introduction to biomedical engineering. Approximately 20 high schools students and parents attended the event.

Upcoming Events:

Date: March 4, 2010

Event: Technical Presentation Series - How non-engineers, like me, use BME: an interventional radiologist's perspective

Speaker: Ian J. Wilson, MD (Dept. of Imaging Sciences, University of Rochester)

Location: University of Rochester, Goergen Hall, Rm. 104. 4:00 – 6:00 PM.

This series is open to the public. If you are interested in presenting in this series please contact the Rochester EMB Society at Rochester_EMBS@ieee.org.

Date: March 31, 2010

Event: Rochester IEEE Joint Chapter Meeting at the RIT Inn and Conference Center. The keynote speaker will be Kevin J. Parker from the University of Rochester. He is the founding chair of the Rochester EMB Society and a 2009 finalist for the Rochester Engineer of the Year award. His presentation will be: Imaging the hidden elastic properties of tissues: The process of development from the lab to the clinic. The Rochester EMB Society will also host a technical presentation by Thomas Gaborski, President of Simpoire Inc... The title of his presentation will be: Commercializing nanotechnology to improve biomedical research and development.

Date: April 16, 2010

Event: UNYBECC 2010: Showcasing the future of biomedical engineering

Location: University of Rochester Medical Center

The Upstate New York Biomedical Engineering Career Conference (UNYEBECC) 2010 is designed to bring together students & practitioners of Biomedical Engineering and the Life Sciences for panel discussions, technical sessions, and informal extended exchange of ideas important to the future of Biomedical Engineering in the Northeast. Some conference highlights include:

- Assisting participants in planning their academic and industrial careers
- Introducing companies to the wealth of intellectual prowess rooted in Upstate New York
- Exposing participants to innovative research in biomedical engineering and allied areas
- Promoting potential employees through a Career Networking Session

The event is open to the public. Please see web site below for registration information.
<http://www.unybecconference.org/>

UNYBECC 2010 is hosted by the Biomedical Engineering Department at the University of Rochester and is sponsored the by the Rochester EMB Society.

Check Out the New IEEE.tv Web Site

The new Web site incorporates advanced features, as well as a redesigned viewer interface for watching programs. The Web site enables visitors to easily search and sort through the more than 130 videos currently part of the IEEE.tv video library, based on specific topics of interest. The viewer that is used to play programs has also been upgraded to include additional capabilities, including video sharing, social media integration, and full screen viewing. Transcripts for every video are available for download as a NEW members-only feature. Tune in to where technology lives at <http://www.ieee.tv/>



Innovation as a Business Design Challenge

Robert Wolcott, Kellogg School of
Management, Northwestern University

Dr. Robert C. Wolcott, founder and executive director of the Kellogg Innovation Network (www.kinglobal.org), a faculty member of the Kellogg School of Management, Northwestern University, will present a model developed in collaboration with his colleagues at the Kellogg School known as the Innovation Radar.

Featured in one of MIT Sloan Management Review's most popular articles of the past decade, the Radar is used by corporations and governments worldwide to measure the level of innovation performance across all of the ways companies do business. It also provides a powerful bridge between a company's strategy and its innovation portfolio of investments. The Innovation Radar is featured in Dr. Wolcott's recently released book from McGraw-Hill, *Grow From Within: Mastering Corporate Entrepreneurship and Innovation*.

Date: Thursday March 4, 2010
Time: 5:30-7:30pm
Place: RIT Thomas Gosnell Bldg (08) Rm A300
Cost: \$15 IEEE/PDMA members
\$20 non-members
\$5 students
Deadline: Register by 3/1/2010
Registration: <http://www.wnypdma.org/events>
Further info: tr.pian@ieee.org or george.gibson@xerox.com

Sponsors:

IEEE Rochester Section Technology Management Council
Western New York Product Development Management Association (PDMA)

IEEE Rochester Section

Microwave Theory & Techniques Society

Members Meeting

PIZZA AND BEVERAGES WILL BE PROVIDED!

Please join our discussion session.

Agenda:

- 1) Discuss MTT events and presentations for 2010.
- 2) Promoting membership in the society.

Date: 3/11/2010

Time: 5:30 – 6:30 P.M.

Place: R.I.T.

Kate Gleason College of Engineering, Gleason Building
Room: 09-2255





2010 Rochester Section Joint Chapters Meeting

March 31, 2010

RIT Inn & Conference Center, 5257 W. Henrietta Road

Registration and refreshment:	5:00 – 5:30 PM
Chapter Technical Presentations:	5:30 – 6:30 PM
Networking (cash bar):	6:30 – 7:00 PM
Dinner & Keynote Presentation:	7:00 – 9.30 PM

Keynote Speaker

2009 Finalist for the Rochester Engineering Society
Leo H. East Engineer of the Year Award

Dr. Kevin J. Parker

Professor, Electrical and Computer Engineering
Dean Emeritus, School of Engineering and Applied Sciences
University of Rochester



Imaging the hidden elastic properties of tissues: The process of development from the lab to the clinic

Kevin J. Parker earned his graduate degrees from MIT and has served at the University of Rochester as Professor, Department Chair, Director of the Rochester Center for Biomedical Ultrasound, and Dean of the School of Engineering and Applied Sciences. His research is in image processing and medical imaging, and he is a fellow of the IEEE, the AIUM, and the Acoustical Society of America. He is an inventor or a founder of a number of enterprises, including the field of elastography and the International Conference series in that area, the Blue Noise Mask, and VirtualScopics, Inc. Professor Parker has over 150 journal publications and dozens of US and international patents.

Parallel Technical Presentations (5:30 – 6:30 PM)*

Electron Devices and Circuits and Systems Joint Chapter

Computer Society -- Prof. Sudeep Sarkar, University of South Florida, Perceptual Organization: The search for structure and organization in images

Signal Processing Society Prof. Sheila Hemami, Cornell University, Task-Based Imaging – Image usefulness and its relationship to image quality

EMC/PSE -- James Herrmann, Principal Engineer at AppliedLogix, LLC. Best PWBA Design Practices for Achieving Optimal EMC, Signal Integrity, and Power Integrity.

Microwave Theory & Techniques

Engineering in Medicine & Biology Society -- Thomas Gaborski, President, Simpure Inc., Commercializing Nanotechnology to Improve Biomedical Research and Development

Comm. Soc & Aerospace

Technology Management Council -- James S. Senall, President, High Tech Rochester, Issues related to Technology Infusion in Upstate New York

*No charge for attending technical presentations. Reservation / registration not required.

Dinner Selections

New York Strip Steak

Peppercorn Rubbed with Roasted
Sliced Portabella Mushrooms

Or Chicken Roulade

Filled with Serrano Ham & Gruyere
Cheese, Smoked Tomato Nage

Or Vegan Grilled Vegetable Napoleon

Layers of Peppers, Eggplant and Portabella Mushrooms
on Steamed Rice, Chimichurri Drizzle

All dinners include salad, dinner roll basket, coffee, tea, and dessert

Reservations (required for dinner):

Contact the reservation clerk at RES, 585-254-2350 (or res@frontiernet.net) by March 24th to guarantee your dinner choice. Please also indicate which technical presentation you will be attending.

Dinner: \$20.00 (IEEE members), \$25.00 (Non-members), and \$10 for Student members.

Further details and on-line registration at: <http://www.r1.ieee.org/~roch/>