

March 2010

Rock River Valley Section

www.ieee.org/rrvs

Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

IEEE RRVs, EMC Chapter and Rock Valley College Meeting

SERVING IEEE MEMBERS OF NORTH CENTRAL ILLINOIS AND EXTREME SOUTH CENTRAL WISCONSIN

Antennas and Field Probes for EMC Testing

WHEN Thursday, March 25, 2010

WHERE

Rock Valley College, Woodward Technology Center, Room 142. I-90 to Riverside Blvd., exit and go west to Mulford Rd. Go south to 2nd light, turn east into RVC. Follow road to left to last building on right.

AGENDA

6:00 PM Networking

6:15 PM Dinner

7:00 PM Presentation

PROGRAM

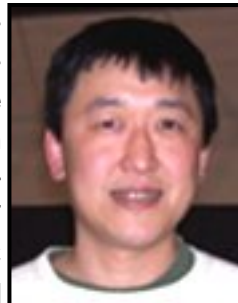
This presentation covers the basic theory and applications of EMC radiated measurements using antennas and field probes. It strives to cover the operating principles and applications of antennas and field probes beyond those specified in typical manufacturer's data sheets. The discussions are concentrated on some specific aspects of antennas and probes in calibration and testing to EMC industry standards, such as background information and rationales for recent changes in the standards, and impact of these changes on daily EMC measurements.

The implications of the antenna characteristics on EMC testing are

discussed including the nature and use of antenna factors, gain, radiation resistance, VSWR, etc. Uncertainty evaluations of the antenna and probe calibrations are considered, along with the implications of the uncertainties in typical end use situations. Applications of the antennas and probes in radiated emissions and immunity tests as well as radiated site validation measurements are addressed.

SPEAKER

Zhong Chen, is a senior principal design engineer at ETS-Lindgren. He has more than 15 years of experience in RF testing, and EMC antenna and field



probe design and measurements. He is an active member of ANSI ASC C63 committee and its working groups responsible for antenna calibration and test site validation. He is chairman of IEEE 1309 committee for developing calibration standards for field probes. He chaired and spoke at the popular Antennas and Field Probes workshops at the IEEE EMC Sym-

posiums in the past several years. Zhong Chen received his M.S.E.E. degree in electromagnetics from the Ohio State University at Columbus.

MEAL INFORMATION

Dinner will feature a chicken entrée and a vegetarian entrée. The costs are: member: \$5, non-member: \$10, student members: \$2, student non-members: \$5. Please make **dinner reservations online (preferred) at http://meetings.vtools.ieee.org/meeting_view/list_meeting/1739** or by emailing Ginger at ginger.spinasantata@hs.utc.com by **Tuesday, March 23, at 5pm**. Please include the following: name, phone number, email address, IEEE member number, choice of entree. Unemployed members may call the Treasurer for special arrangements.

NOTE

The meeting is open to the general public. You need not be an IEEE member to attend. Guests are welcome. Please email Ginger at ginger.spinasantata@hs.utc.com for questions.

February RRV Section Meeting Recap

On Feb. 18, IEEE RRV Section hosted Dr. Waleed Said, a Hamilton Sundstrand Senior Fellow, who gave a presentation on the evolution of electrical power technology within the aerospace industry. About 80 people, composed of industry professionals, students, and professors, were in attendance at this lively event.

Dr. Said was introduced by Dr. Sam Barada, the local chairman of the Control and Computer Systems Chapter. The event was held at Rock Valley College where attendees listened to Dr. Said's presentation entitled "Aerospace Applications Demand Efficient Use of Electrical Power." The presentation provided a historical overview of aircraft electrical power technology and the progression of power generation, distribution, conversion and utilization. Dr. Said also described certain power electronics technologies and programs that enabled and led to the realization of the more electric airplane. Speaking to a diverse audience, Dr. Said used the opportunity to set what he believes are the aerospace industry's expectations from both academia and industry suppliers, especially in the area of power electronics.



"In the world of large thrust aircraft engines, there are only three engines that are designed to start by using the electrical generator as a starter: Pratt and Whitney's F135, Rolls-Royce's Trent 1000 and GE's GENx," Said explained. "Hamilton Sundstrand is the only supplier with qualified starter/generator and associated power electronics equipment to start all of them. No other company even comes close."

Dr. Said shared his views on Hamilton Sundstrand's electrical power generation and conversion capabilities. He, then, fielded questions from the audience that focused on issues related to innovation at the component and system levels.

After the presentation, Dr. Said and a group of attendees were given a tour of the electrical and electronics laboratories at Rock Valley College. The tour was guided by Professor

HS Senior Fellow, Waleed Said, shakes hands with Joe Etminan, IEEE RRVS IAS Chair, during his Feb. 18, presentation to the Institute of Electronics and Electrical Engineers (IEEE).

April RRV Section Meeting Preview

Please join us April 29 for the next RRV section meeting which will feature a panel of consultants discussing the pros and cons of being a consultant.

IEEE Chicago/Rockford Consultants' Network Meeting

** A joint Affinity Group of the IEEE Chicago and Rock River Valley Sections **

The next meeting will be on **Monday, March 29, 2010**. The **optional informal dinner** is at 5:30 PM at Bakers' Square, 270 E. Northwest Highway (corner of North Court), just south of the library, and the meeting at 6:45 PM at the Palatine Public Library in Room 1A, 700 North Court, Palatine, IL 847-358-1216. Please go to <http://ewh.ieee.org/r4/chicago/cn> for more info. Attendees may earn 1 PDH. The topic will be:

- **"Using the Internet to find Consulting Jobs" by Wesley G. Martin, P.E.**

Wesley will share his experience in using the internet while searching for employment and how the same techniques may be used to find consulting. Wesley will also explain how he made his start in consulting.

Wesley G. Martin, P.E. a director of the IEEE Chicago/Rockford Consultants' Network. He was recently employed by Middough, Inc as their Senior Electrical Engineer. Wes is the former sole proprietor of W. G. Martin & Associates.

2011 Candidate Slate for RRVS Elected Positions

In accordance with the RRVS bylaws, the Nominations Committee has submitted the names of the following individuals (pictured at right) as nominees for the seven elected positions on the RRVS Executive Committee for 2011. The election will be held in May. This election is for offices to be held from January 1 thru December 31, 2011.

- Chair** Alkesh Patel
- Vice Chair** Larry Wachowiak
- Treasurer** Adrian Vandergriff
- Secretary** Kevin Kehl
- Comp/CS Ch** Sam Barada
- PELS Chair** Mark Harris
- IAS Chpt Ch** Joe Etminan
- EMC Chair** Jamal Shafii

Additional nominees can be submitted by petition from the section membership. A potential nominee must be an IEEE member in good standing and a member of the RRVS. A petition must be signed by at least 20 RRVS members. Deadline for petitions is April 15. Please submit petitions to Alkesh Patel (see contact info on page 4).

Chair



Alkesh Patel

Vice Chair



Larry Wachowiak

Treasurer



Adrian Vandergriff

Secretary



Kevin Kehl

Computer/Control Systems Chapter Chair



Sam Barada

PELS Chapter Chair



Mark Harris

IAS Chapter Chair



Joe Etminan

EMC Chapter Chair



Jamal Shafii

2010 IEEE RRVS Executive Committee



Alkesh Patel
Chair
alkesh.patel@ieee.org
815-394-2487



Larry Wachowiak
Vice Chair
l.wachowiak@ieee.org
815-397-9090



Mohsin Chowdhury
Secretary
mohsin.chowdhury@ieee.org
815-226-6893



Adrian Vandergrift
Treasurer
aevandergrift@ieee.org
815-226-2518



Jitendra Solanki
PACE & MD Chair
j.solanki@ieee.org
815-394-5675



Bob Parro
Communications Chair
PELS Chair
b.parro@ieee.org
815-877-6670



Joe Etminan
IAS Chapter Chair
joeetminan@ieee.org
815-921-3058



Prof. Don Zinger
NIU St Br Counselor
d.zinger@ieee.org
815-753-0540

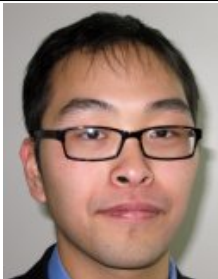


Dr. Sam Barada
Computer/Control
Systems Chair
sbarada@ieee.org
815-226-6751



Jamal Shafii
EMI/EMC Chapter Chair
jamalshafii@ieee.org
815-394-5676

Northern Illinois University Student Branch Officers



Chong Huh
Chair



Anton Finko
Vice Chair



Mike Eaton
Treasurer



Matt Young
Secretary



Terry Johnson
GOLD Chair
terry.johnson@hs.utc.com
815-394-2447



Annette Hartlaub
WIE Chair
mseece07@yahoo.com
630-806-7062



Richard Gocken
Education Chair
r.gocken@rockvalleycollege.edu
815-921-3055

Messages for student officers can be left at the NIU Dept of Electrical Engineering, (815) 753-9974 or e-mail at sb.niu@ieee.org

The Rock River Valley Section gratefully acknowledges the following companies and colleges for supporting Section Officers:

[Hamilton Sundstrand](#) • [Northern Illinois University](#) • [Rock Valley College](#) • [River North Solutions](#)



Update Your Own IEEE Member Contact Info Online

<http://www.ieee.org/web/membership/home/index.html>

IEEE Personal E-Mail Alias Service with Free Virus Scanning

The IEEE now offers an **Alias Service** in which all IEEE **members** can register a **personal alias** of their choice, which will forward E-Mail to their real internet e-mail address. Visit...

<http://eleccomm.ieee.org/personal-aliases.shtml>

Electronic IEEE Membership Application

<http://www.ieee.org/web/membership/join/join.html>

RRVS Calendar

- March RRVS Meeting** **March 25**
 "Antennas and Field Probes for EMC Testing", Rock Valley College, Rockford, IL
- April RRVS Meeting** **April 29**
 Consultants Network Panel Discussion, Rock Valley College, Rockford, IL
- May RRVS 2011 Officer Election and Annual Picnic Meeting** **May 27**
 Steak barbeque, Hamilton Sundstrand Park, Belvidere, IL

Rock River Valley Section Chapters

Industry Applications Society Chapter
 Established 1992

Joint Computer/Control Systems Society Chapter
 Established 1995

Power Electronics Society Chapter
 Established 1996

Electromagnetic Compatibility Society Chapter
 Established 2007

Time-Sensitive Material

Inside This Issue

- March RRVS Section, EMC Chapters and Rock Valley College Meeting 1
- February RRV Section Meeting Recap 2
- April RRVS Section Meeting Preview 2
- IEEE Chicago/Rockford Consultants' Network Meeting 2
- 2011 RRVS Officer Slate of Candidates 3
- 2010 RRVS Officer Contact Information 4
- RRVS Calendar 5