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March 2009

Rock River Valley Section

[www.ieee.org/rvsv](http://www.ieee.org/rvsv)

Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

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## RRV Section and EMC Chapter Meeting/Tour

# Engineering Aspects of Electromagnetic Shielding

**WHEN** Thursday, March 26, 2009

### WHERE

Ingenium Testing, Rockford, IL. From the I-39/I-90 Interchange, exit west onto I-39/Hwy 20 West for 7 miles. Exit North on Hwy 2/ North Main Street. Merge left, turn left at the Mobil Gas Station onto Southrock Dr. Go West 2 blocks to Central Ave and turn right. Ingenium is 2nd building on left.

### AGENDA

5:30 PM Networking  
6:00 PM Dinner  
6:45 PM Presentation  
~8:00 PM Ingenium Tour

### PROGRAM & TOUR

Every electronic equipment uses some type of shielding, and from a theoretical point of view, electromagnetic shielding is among the most difficult areas of EMC. The lecture will introduce basic shielding concepts, describing their practical limitations, and present the typical engineering problems associated with shielding. Among aspects discussed will be the materials used for shielding, chassis resonances, shielding integrity problems (seams, joints, apertures, perf patterns), aperture coupling and shield grounding. A tour of Ingenium will follow the lecture.

### SPEAKER

**Dr. Sergiu Radu** is currently

Principal Engineer at Sun Microsystems, leading the EMC Design group in Menlo Park, California. His



role at Sun includes the development and implementation of architectural frameworks for EMC Design through design guidelines and best practices, and to provide forward looking solutions, root cause analysis of significant EMC problems, design methodologies involving software simulations and better prediction techniques.

Sergiu Radu received a M.S. and a Ph.D. in Electrical Engineering (Electronics) from Technical University of Iasi, Romania, and until 1996 he was an Associate Professor at the same university, involved in Electromagnetic Compatibility teaching and research. From 1996 until 1998 he was a Visiting Scholar

at the University of Missouri-Rolla, as part of the Electromagnetic Compatibility Laboratory. In 1998 he joined the EMC Engineering group at Sun Microsystems. Sergiu holds seven US patents for EMI reduction techniques in electronic systems and has published more than 50 papers in research journals, symposia, and magazines. He is a reviewer for IEEE Transactions on EMC. He is also a distinguished lecturer for the IEEE EMC Society.

### MEAL INFORMATION

Dinner will feature Roast Turkey and Vegetable Lasagna. The costs are: member: \$5, non-member: \$10, student members: \$2, student non-members: \$5. Please make **dinner reservations** by calling **Ginger at 815-394-5696** or sending her an email (**ginger.spinasanta@hs.utc.com**) by **Tuesday, March 24, at 5pm**. Please include the following: your name, phone number, email address, IEEE member number, and 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 call Ginger at 815-394-5696 for questions.

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**2010 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 2010. The election will be held at the May 28th section meeting. This election is for offices to be held from January 1 thru December 31, 2010.

- Chair** Alkesh Patel
- Vice Chair** Larry Wachowiak
- Treasurer** Adrian Vandergrift
- Secretary** Mohsin Chowdhury
- Comp/CS Ch** Joe Etminan
- PELS Chair** Bob Parro
- IAS Chpt Ch** Don Zinger
- 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 May 15. Please submit petitions to Alkesh Patel (see contact info on page 4).

**Chair**



**Alkesh Patel**

**Vice Chair**



**Larry Wachowiak**

**Treasurer**



**Adrian Vandergrift**

**Secretary**



**Mohsin Chowdhury**

**Computer/Control Systems Chapter Chair**



**Joe Etminan**

**PELS Chapter Chair**



**Bob Parro**

**IAS Chapter Chair**



**Don Zinger**

**EMC Chapter Chair**



**Jamal Shafii**

## 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 30, 2009**. 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, 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 two topics will be:

- "An overview of emerging technologies including wind, solar cell, fuel cell and biofuels" by **Stafford Cuffe**
- "PLC's in the 21st Century" by **Benjamin D. Miller**

Stafford Cuffe's overview of emerging technologies including wind, solar cell, fuel cell and biofuels, will include practical applications to reduce America's dependence on imported oil and the reduction of greenhouse gases. In addition he will discuss the increased demand for engineers and consultants in the alternative energy industry due to the increased level of government funding. He will also share some of his experience on how to get started in consulting.

Ben Miller will provide an overview of the current state of PLC technology. He will discuss what they do, how they do it, how they have evolved in recent years, and why they won't go away! He will also share some of his experience on how to get started in consulting.

## February RRVS Meeting Recap — Making Fun: Your Future in Video Games

The Rock River Valley Section thanks David Rodriguez, Senior Designer at Vicarious Visions, an Activision/Blizzard Studio responsible for "Guitar Hero: On Tour" and "Guitar Hero: World Tour", for an entertaining two hours of Guitar Hero game trials and an informative presentation on the life of a video game developer. The RRVS also extends its thanks to the Rockford Best Buy store for supplying the large screen TVs for the game trials.



**April RRV Section Meetings Preview — (1) Tour of Woodward Governor on April 16, and (2) IEEE Chicago/Rockford Consultants Network Meeting at Rock Valley College on April 30**

We will tour Woodward Governor's aerospace facility in Rockford in the middle of the month.

At the end of the month, the joint Consultants Network between the Chicago and Rock River Valley Sections will hold a rare meeting in Rockford. Normally the meetings are held in Palatine, IL.



## IEEE GOLD NETWORKING SOCIAL



## 9 Pin – No Tap

**Location:** Forest Hills Lanes  
**Address:** 7742 Forest Hills Rd Loves Park, IL 61111  
**Date:** Friday, March 20  
**Time:** 5:30PM  
**Contact:** Terry Johnson IEEE GOLD Chair  
**Phone:** 815-394-2447  
**Email:** [terry.johnson2009@ieee.org](mailto:terry.johnson2009@ieee.org)



## 2009 IEEE RRVs Executive Committee



**Alkesh Patel**  
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### Northern Illinois University Student Branch Officers



**Abdul Rahman Mohammed**  
Chair



**Mohammed Saim**  
Vice Chair



**Andrew Baker**  
Treasurer



**Kelly Goode**  
Secretary



**Terry Johnson**

GOLD Chair  
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815-394-2447



**Jamal Shafii**

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815-394-5676



**Richard Gocken**

Education  
Chair  
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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](#)



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[www.ieee.org/join](http://www.ieee.org/join)

**RRVS Calendar**

<b>March RRVS GOLD Meeting</b> .....	<b>(see page 3)</b> .....	<b>March 20</b>
Bowling at Forest Hills Lanes, Loves Park, IL		
<b>March RRVS Section Meeting/Tour</b> .....		<b>March 26</b>
Engineering Aspects of Electromagnetic Shielding, Ingenium Testing, Rockford, IL		
<b>April RRVS Section Tour</b> .....		<b>April 16</b>
Woodward Governor, Rockford, IL		
<b>April RRVS Section/IEEE Chicago/Rockford Consultants Network Meeting</b> .....		<b>April 30</b>
TBD, Rock Valley College, Rockford, IL		
<b>May RRVS Section Picnic/2010 Officer Elections</b> .....		<b>May 28</b>
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

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