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March 2006

Rock River Valley Section

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Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

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RRVS Section and C/CS Joint Chapter Meeting

## Emerging Nanotechnology Device and Circuit Technologies

**WHEN WEDNESDAY,** March 29, 2006

### WHERE

Rock Valley College, **Woodward Technology Center, Rooms 117/119.** 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  
6:30 PM Dinner  
7:30 PM Presentation

### PROGRAM

The International Technology Roadmap for Semiconductors (ITRS) has identified several candidates of emerging research device and circuit technologies. An overview of these emerging nanotechnologies will be presented, including resonant-tunneling diodes, single-electron transistors, and Quantum-Dot Cellular Automata, a concept developed at Notre Dame.

### SPEAKER

**PROFESSOR WOLFGANG POROD** currently is Frank M. Freimann Professor of Electrical Engineering at the University of Notre Dame. He re-



ceived his Diplom (M.S.) and Ph.D. degrees from the University of Graz, Austria, in 1979 and 1981, respectively. After appointments as a postdoctoral fellow at Colorado State University and as a senior research analyst at Arizona State University, he joined the University of Notre Dame in 1986 as an Associate Professor. He now also serves as the Director of Notre Dame's Center for Nano Science and Technology. His research interests are in the area of nanoelectronics, with an emphasis on new circuit concepts for novel devices. He has authored some 300 publications and presentations.



He is a Fellow of the IEEE and he has served (2002-2003) as the Vice President for Publications on the

IEEE Nanotechnology Council. He also has been appointed an Associate Editor for the new IEEE Transactions on Nanotechnology. He is a Founding Member of the IEEE Circuits and Systems Society's Technical Committee on Nanoelectronics and Gigascale Systems.

### MEAL INFORMATION

Dinner will feature a buffet consisting of roast turkey and vegetable lasagna entrees, rolls, salad, vegetables, potatoes, and assorted small deserts. The costs are: member and student non-members: \$7, non-member: \$11, and student members: \$5. Please make your **dinner reservations** by **calling Ginger at 815-394-5696 or sending her an email (ginger.spinasanta@hs.utc.com) by Monday, March 27, at 5pm.** Please include the following information: your name, phone number, email address, IEEE member number, and choice of dinner entrée. Unemployed members may call one of the officers for special arrangements.

### NOTE

The meeting is open to the general public. You need not be an IEEE member. Guests are welcome. Please call Ginger at 815-394-5696 for questions.

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**2007 Candidate Slate for RRVS Elected Positions**

In accordance with the RRVS by-laws, 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 2007. The election will be held at the May 25 section meeting. This election is for offices to be held from January 1 thru December 31, 2007.

- Chair** Joe Etminan
- Vice Chair** Paul Hofmann
- Treasurer** Adrian Vandergriff
- Secretary** Nolan Wanner
- Comp/CS** Byron Mehl
- PELS** Neal Clements
- IAS** Alkesh Patel

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 Jitendra Solanki (see contact info on page 3).

**Chicago/Rockford IEEE Consultants Network Meeting**

The next meeting will be on Monday, **March 27, 2006**. The optional informal dinner is at 6:15 PM at Bakers' Square (270 E. Northwest Highway and North Court), and the meeting at 7:30 PM at the Palatine Public Library (700 North Court, Palatine, IL. Please go to <http://www.drblank.com/coaction.htm> for more info. The subject is "Preparing and Managing Your Consulting Practice with an Effective Business Plan".

Chair



Joe Etminan

Vice Chair



Paul Hofmann

Treasurer



Adrian Vandergriff

Secretary



Nolan Wanner

Computer/Control Systems Chair



Byron Mehl

PELS Chair



Neal Clements

IAS Chair



Alkesh Patel

**February RRVS Meeting Recap**

Michael Zolidis, Chief Engineer, Hamilton Sundstrand (HS), Electric Systems, and Director Electric Systems 787 Programs, gave a very enlightening presentation on Ram Air Turbine (RAT) Emergency Aircraft Power. Mike provided an entertaining discussion with the audience while conveying the history and development of the RAT at the world's largest supplier of this technology, HS. Mike included some excellent video clips showing the effect of RAT envelope design on ice formation on the tip of the RAT, as well as the effects of lightning strikes.

The RAT deploys in 1.8 seconds to provide emergency power. Since 1974 there have been 12 incidents where a RAT has been deployed, saving 1,421 lives.

**April RRVS Tour Preview**

The tour this month will be held at the Byron Nuclear Power Station in the Training Room where attendees will be provided a demonstration of the control room simulator during a variety of plant fault conditions.

**Submissions to Event Sense**

Send articles and job ads to the *Event Sense* editor, Bob Parro, via e-mail. Please make submissions by the twenty-fifth of the month. All submissions are subject to editing for style, clarity, and space considerations.

e-mail: [b.parro@ieee.org](mailto:b.parro@ieee.org)

# 2006 IEEE RRVS Executive Committee



**Jitendra Solanki**  
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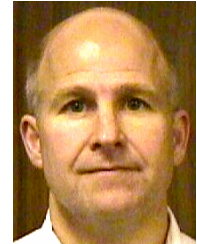
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## Northern Illinois University Student Branch Officers



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Chair



**Priya Thanigai**  
Vice Chair



**Lakshminarayannan**  
Secretary



**McClean Wendt**  
Treasurer

*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 university for supporting Section Officers:**

**Hamilton Sundstrand • Northern Illinois University • BP Technologies**



**Mark Eldredge**  
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**Rock River Valley Section**  
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**RRVS Calendar**

- March RRVS Section Meeting ..... WEDNESDAY..... March 29**  
"Emerging Nanotechnology Device and Circuit Technologies" at Rock Valley College
- April RRVS Section Tour ..... April 27**  
Annual tour is planned to the Byron Nuclear Power Station in Byron, IL
- May RRVS Section Election/Picnic Meeting ..... May 29**  
Annual RRVS Officer and Chapter Chair Election and Picnic at Hamilton Sundstrand Park



Joint Computer/  
Control Systems  
Society Chapter  
Established 1995



Industry  
Applications  
Society Chapter  
Established 1992



Power  
Electronics  
Society Chapter  
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