

---

---

April 2007

Rock River Valley Section

ieee.rackoneup.net

Event



Sense

The Institute of Electrical and Electronic Engineers, Inc.

---

---

RRV Section and IAS Chapter Meeting

## Energy Storage Technology, Markets and Applications, Ultracapacitors in Combination with Lithium-ion

**WHEN** Thursday, April 26, 2007

**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/ Robotics Demo
6:30 PM	Dinner
7:30 PM	Presentation

**PROGRAM**

Ultracapacitors are becoming widely accepted in the energy storage industry in both stand-alone and in combination with batteries. Standalone applications, once niche, are now rapidly expanding as the technical and economic benefits of this power dense component become more widely understood. Combination examples continue to proliferate, primarily in battery electric and hybrid electric commercial transportation segments such as transit buses and trains. The ultracapacitor offers a fast energy buffer to advanced chemistry energy reservoirs such as nickel metal hydride and lithium batteries and offer an opportunity for truly energy optimized battery systems.

This presentation will discuss trends in energy storage systems, advanced chemistry batteries such as nickel-hydrogen and lithium-ion and why such components would benefit from working in combination with carbon capacitors.

**SPEAKER**

**John M. Miller**, Vice President of Advanced Transportation Applications, Maxwell Technologies, Inc., (M'82, SM'94, F'99 of IEEE) received the BSEE from the University of Arkansas, Fayetteville, the MSEE degree from Southern Methodist University, Dallas, TX, and the PhD degree from Michigan State University, East Lansing, MI, all in electrical engineering. Dr. Miller has authored over 120 publications on automotive electrical and electronic systems, utility power systems and transportation systems and holds 51 U.S. Patents. He has authored or co-authored three books. In January 2006, he joined Maxwell Technologies as Vice President of Advanced Transportation Applications. In this capacity he supports strategic marketing and product applications through systems level analysis, modeling, simulation and customer collaboration in emerging technical areas. He brings to Maxwell Technologies a systems perspective and works closely with the research, en-

gineering and business sides of the company. He is a registered and practicing professional engineer in Michigan since 1980, a Fellow of the IEEE, and IEEE Power Electronics Society distinguished lecturer and editor-in-chief of Power Electronics Society newsletter.

**MEAL INFORMATION**

Dinner menu: Mexican Fiesta: Tacos, Chicken Enchiladas, bean and cheese burritos, Spanish rice, beans, nacho salad and Mexican cookies. The costs are: member and student non-members: \$5, non-member: \$10, and student members: \$2. Please make your **dinner reservations by calling Ginger at 815-394-5696 or sending her an email (ginger.spinasanta@hs.utc.com) by Monday, April 23, 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.

---

---

**2008 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 2008. The election will be held at the May 31 section meeting. This election is for offices to be held from January 1 thru December 31, 2008.

- Chair** Joe Etminan
- Vice Chair** Paul Hofmann
- Treasurer** Adrian Vandergrift
- Secretary** Larry Wachowiak
- Comp/CS Ch** Byron Mehl
- PELS Chair** Neal Clements
- IAS Chpt Ch** 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 Joe Etminan (see contact info on page 3).

**Local High School Robotics Team to Demo Robot at April 26th RRVS Meeting**

Winnebago High School's robotics team, Winnovation, will discuss last year's and this year's robotics project. They will also perform a demonstration of the technology they have developed and the application of the technology to the challenge/game rules for the 2007 US FIRST robotics competition during the meeting's social time. In 2006 the Winnovation robotics team came in 8th in the national competition.

Chair

Vice Chair

Treasurer

Secretary

Computer/Control Systems Chapter Chair

PELS Chapter Chair

IAS Chapter Chair

Joe Etminan

Paul Hofmann

Adrian Vandergrift

Larry Wachowiak

Byron Mehl

Neal Clements

Alkesh Patel

**March RRVS Meeting Recap**

Dr. Kaushik Rajashekara, senior technologist with Rolls-Royce Corporation, discussed hybrid electric and fuel cell vehicle architectures for transportation power generation.

**May RRVS Meeting Preview**

Members please join us for a free steak dinner at our annual picnic/elections meeting at Hamilton Sundstrand Park on Thursday, May 31st.

**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)

## **2007 IEEE RRVS Executive Committee**

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

**Paul Hofmann**  
Vice Chair,  
paul.hofmann@  
hs.utc.com  
815-226-3876

**Larry Wachowiak**  
Secretary  
l.wachowiak@ieee.org  
815-397-9090

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

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

**Bob Parro**  
Newsletter Editor  
b.parro@ieee.org  
815-877-6670

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

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

**Nolan Wanner**  
Member-at-large  
n.wanner@ieee.org  
815-394-5922

**Neal Clements**  
PELS Chapter Chair  
n.clements@ieee.org  
815-226-6182

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

**McClellan Wendt**  
Chair

**Divya Vangari**  
Vice Chair

**Avinash Naik**  
Secretary

**Mohammad Ali**  
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 colleges for supporting Section Officers:*

**Hamilton Sundstrand • Northern Illinois University •  
Rock Valley College • River North Solutions**

**Javvad Qasimi**  
GOLD Chair  
jav-  
vad@ieee.org  
815-235-5547

**Jamal Shafii**  
EMI/EMC  
Chapter Chair-  
jamal.shafii@hs.  
utc.com  
815-394-5676

**Byron Mehl**  
Computer/  
Control Sys-  
tems Chair  
byron.mehl@h  
s.utc.com  
815-394-2991



Rock River Valley Section  
Established 1947

**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. Go to:

[elecomm.ieee.org/personal-aliases.shtml](http://elecomm.ieee.org/personal-aliases.shtml)

**Update Your Own IEEE Member Contact Info  
Online**

[services1.ieee.org/membersvc/coa/intro.htm](http://services1.ieee.org/membersvc/coa/intro.htm)

**Electronic IEEE Membership Application**

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

**RRVS Calendar**

- April RRVS Section Meeting ..... April 26  
"Energy Storage Technology, Markets and Applications, Ultracapacitors in Combination with Lithium-ion" at Rock Valley College, Rockford, IL
- May RRVS Section Election/Picnic ..... May 31  
At Hamilton Sundstrand Park, Belvidere, IL



Joint Computer/  
Control Systems  
Society Chapter  
Established 1995



Industry  
Applications  
Society Chapter  
Established 1992



Power  
Electronics  
Society Chapter  
Established 1996

Non-profit Org.  
U.S. Postage  
**PAID**  
Rockford, IL  
Permit No.496

**Time-Sensitive Material**

*Inside This Issue*

- April RRVS Section Meeting Notice ..... 1
- 2008 Candidate Slate for RRVS Elected Positions ..... 2
- Local High School Robotics Team to Demo Robot at April 26th RRVS Meeting ..... 2
- March RRVS Meeting Recap ..... 2
- May RRVS Meeting Preview ..... 2
- 2007 RRVS Officer Contact Information ..... 3
- RRVS Calendar ..... 4