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April 2007

Rock River Valley Section  
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Event



Sense

The Institute of Electrical and Electronic Engineers, Inc.

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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.spinasant@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.

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**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**

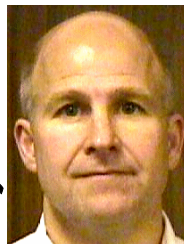
Winnebago High School's robotics team, Winnovation, will discuss last year's and this year's robotics project. They will also perform a demonstration of the technology they have developed and the application of the technology to the challenge/game rules for the 2007 US FIRST robotics competition during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

Chair



Joe Etminan

Vice Chair



Paul Hofmann

Treasurer



Adrian Vandergrift

Secretary



Larry Wachowiak

Computer/Control Systems Chapter Chair



Byron Mehl

PELS Chapter Chair



Neal Clements

IAS Chapter Chair



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



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*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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## 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/  
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Society Chapter  
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### Time-Sensitive Material

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