

January 2012

Rock River Valley Section

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Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

IEEE RRVs, PELS Chapter, and Rock Valley College Meeting
SERVING IEEE MEMBERS OF NORTH CENTRAL ILLINOIS AND SOUTH CENTRAL WISCONSIN

Hybrid and Electric Vehicles: Where Are We and Where Are We Going?

WHEN Thursday, January 26, 2011

WHERE

Rock Valley College, Woodward Technology Center, Room 142. I-90 to Riverside Blvd., exit 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

There is perhaps no other case of such anticipation for a new technology on the part of the general public over the last 30 years as has happened with electric and hybrid vehicles. The idea is hardly new though: at one point early in the 20th century there were more electric cars than gasoline powered horseless carriages on the road. Yet despite so many attempts over the years, the technology has yet to take over our highways. Where do we stand? Has the Prius really accomplished the long-awaited breakthrough? In this presentation, I will go over some of the history of vehicle electrification, note the achievements that have already taken place, and explain the remaining challenges ahead of us. The focus

will be on the electrical drive, from battery, power electronics, to motors, with as many system considerations as possible. The presentation will also expand beyond passenger cars and present some of the special opportunities and challenges afforded by other transportation segments, such as trucks, buses, and off-road vehicles.

SPEAKERS

Bruno Lequesne, Principal Engineer, Eaton Corporation - Innovation Center, was born in France. He received a first degree in France, in 1978, and a PhD degree in EE from the University of Missouri-Rolla, USA, in 1984. He then joined the EE Department of General Motors Research Laboratories. In 2006 he managed a group within the Advanced Powertrain Engineering organization of Delphi. After a brief stint with the University of Alabama's Center for Advanced Vehicle Technologies, he joined Eaton Corp.'s Innovation Center in 2010 to develop programs in the hybrid vehicle field. His research focus has been in the automotive and transportation fields, developing new electro-mechanical systems for valvetrains, generators, electric brakes, and, hybrid propulsion. He holds 48 patents. He is the recipient of ten Best Paper Awards, seven from the IEEE Industry Applications

Society (IAS), and three from the Society of Automotive Engineers. He was elected an IEEE Fellow in 1997. Bruno has been involved with the IEEE IAS primarily in the Electrical Machines and Industrial Drives committees. He is now IAS Society President.

MEAL INFORMATION

Dinner will feature Chicken Alfredo, Pasta Primavera, Italian salad, vegetables, fresh fruit and dessert. Costs: 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/10259 or by **emailing Ginger at ginger.spinasanta@hs.utc.com by Tuesday, January 24, at 5pm.** Please include the following: name, phone number, email address, IEEE member number, and meal selection. 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.spinasanta@hs.utc.com with questions.

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RRVS Calendar

- January RRV Section Meeting January 26**
Hybrid and Electric Vehicles: Where Are We and Where Are We Going?, Woodward Technology Center, Rock Valley College, Rockford, IL
- February RRV Section Meeting February 23**
US Congressman Don Manzullo, Woodward Technology Center, Rock Valley College, Rockford, IL
- March RRV Section Meeting March 15**
TBD, Woodward Technology Center, Rock Valley College, Rockford, IL
- April RRV Section Meeting April 19**
TBD, Woodward Technology Center, Rock Valley College, Rockford, IL

Rock River Valley Section Chapters

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Society
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Control Systems
Society Chapter

Established 1995

Power
Electronics
Society
Chapter

Established 1996

Electromagnetic
Compatibility
Society
Chapter

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Time-Sensitive Material

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