
October 2009

Rock River Valley Section

www.ieee.org/rrvs

Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

Joint IEEE RRVS, EMC Chapter and Rock Valley College Meeting

Design and Application of Ferrite Components for EMC

WHEN Thursday, **October 29, 2009**

WHERE

Rock Valley College, Woodward Technology Center, Room 142. 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

Ferrite core application is widely misunderstood and available literature is limited in scope and depth. This presentation will cover the two primary modes of ferrite core applications which produce quite different device families. One device family includes inductors and transformers. The second device family includes frequency dependent resistors.

The design approaches and devices created differ widely. Inductors and transformers for switching mode power supplies populate the first family of applications. Filtering and EMI suppression components populate the second fam-

ily of devices. Common examples of the second family of devices are the ferrite cores commonly found on various PC cables for EMI suppression.

This presentation will cover the property, design and application of ferrite cores for both families. Curt has studied this subject at some length and will provide useful design information on these widely used cores.

SPEAKER

Curt White has held many EMC positions at Hamilton Sundstrand during a career spanning over forty years including EMC Department



Manager and EMC Advisory Engineer. He is a long time member of the dB Society, one of the most exclusive EMC professional organiza-

tions. He has a B.S. degree in electrical engineering from the University of Illinois at Urbana-Champaign, and an MBA from Northern Illinois University.

Curt's primary interest has been designing EMC into products from program inception. He has created numerous software tools to help in achieving this goal in a cost effective manner.

MEAL INFORMATION

Dinner will feature Roast Turkey and a Vegetarian Pasta Primavera. 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, October 27, 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.

September RRV Section Meeting Recap

The September RRVS meeting featured Bob Vogl, active in renewable energy and retired from the faculty of NIU where for 35 years he focused on alternative energy and environmental quality, gave an interesting talk on "Renewable Energy in Illinois". Bob is a key player in the Illinois Renewable Energy Association, and plays a large role in the annual energy fair in August. Bob recommends Home Power Magazine (www.homepower.com) for energy efficiency guidance on what individuals can do.



Annual November Joint RRV Section and NIU Student Branch Meeting Preview — A Tutorial on the Dynamics and Control of Wind Turbines and Wind Farms

Please join us at NIU's Engineering Building in DeKalb on Thursday, November 19th. This talk will provide a broad overview of wind energy systems, including main components, sensors, actuators, the different operating regions, current state of the art in wind turbine modeling and control, areas of future work, coordinated control of arrays of turbines on wind farms, and modeling and control of floating offshore wind turbines. The speaker is Professor Lucy Y. Pao, the Richard and Joy Dorf Professor of Electrical, Computer, and Energy Engineering at the University of Colorado at Boulder, and IEEE Control Systems Society Distinguished Lecturer.

Rock Valley College Engineering and Technology Division's Spring 2010 Courses

<u>Title/Faculty Member</u>	<u>Days</u>	<u>Time</u>
Intro to Electronics/B. Fleeman	MW	01:00PM — 02:50PM
	TTH	04:30PM — 06:15PM
Intro to Sustainable Energy/S. Fleeman	T	02:30PM — 04:10PM
	W	04:30PM — 06:10PM
Digital Electronics/J. Etminan	MW	11:00AM — 01:40PM
	TTH	07:25PM — 10:05PM
DC/AC Circuits/Electronics I/TBA	W	07:25PM — 10:05PM
	M	07:25PM — 10:05PM
DC/AC Circuits/Electronics II/J. Etminan	MW	08:00AM — 10:40AM
	TTH	04:25PM — 07:15PM
Sustain Electric Energy Gener./S. Fleeman	TH	02:30PM — 04:10PM
Wireless Electronics/S. Fleeman	M	07:25PM — 09:15PM
	W	07:25PM — 09:15PM
EET Capstone Project/TBA	TTH	03:10PM — 04:50PM
EET Seminar/S. Fleeman	M	04:30PM — 07:15PM

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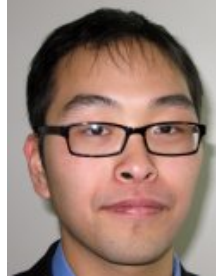
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Messages for student officers can be left at the NIU Dept of Electrical Engineering, (815) 753-9974 or e-mail at sb.niu@ieee.org

The Rock River Valley Section gratefully acknowledges the following companies and colleges for supporting Section Officers:

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RRVS Calendar

October RRVS Meeting	October 29
"Design and Application of Ferrite Components for EMC", Rock Valley College, Rockford, IL	
November Rock Valley College Meeting (10:00am-7:00pm)	November 5
"Mechatronics Mobile", Woodward Technology Center Parking Lot, Rock Valley College, Rockford, IL	
November RRVS GOLD (Graduates of the Last Decade) Meeting	November 12
"TBD", TBD, Rockford, IL	
November Joint RRVS and NIU Student Branch Meeting	November 19
"A Tutorial on the Dynamics and Control of Wind Turbines and Wind Farms", NIU Engineering Building, DeKalb, IL	
January RRVS IEEE 125th Anniversary Celebration Dinner	January TBD
January RRVS Meeting	January 28
"Future Electronic Power Distribution Systems – A Contemplative View", Woodward Technology Center, Rock Valley College, Rockford, 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

Inside This Issue

- October RRVS Section Meeting Notice	1
- September RRV Section Meeting Recap	2
- Annual November Joint RRVS Section and NIU Student Branch Meeting Preview.....	2
- Rock Valley College Engineering and Technology Division's Spring 2010 Courses.....	2
- 2009 RRVS Officer Contact Information	3
- RRVS Calendar	4



Thursday, November 5, 2009

10 AM – 7:00 PM

LOCATION : RVC Campus WTC Building

RVC Engineering & Technology Division & IEEE Rock River Valley Section invite you to :

Learn the latest techniques in Automated Manufacturing, and industry trends for ...

- Electromechanical Drive
- Process Automation
- Automation Services and Solutions

For more information contact :

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Rock Valley College



Celebrating 125 Years
of Engineering the Future