

November 2002

Rock River Valley Section

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The Institute of Electrical and Electronic Engineers, Inc.

Computer/Control Systems, PELS, IAS Chapters Meeting

Nature and Promise of 42 V Automotive Power

When November 21, 2002

Where Northern Illinois University, DeKalb, IL; Engineering Building Auditorium, Room 101. Please call Don Zinger at 753-0540 if you need directions from outside DeKalb.

Please see the map on page 2.

Parking will be allowed in the engineering parking lot behind the engineering building after 5:00 PM at no charge.

Agenda

- 6:00 PM Social
- 6:30 PM Dinner
- 7:30 PM Presentation

Program

This talk describes the motivation for the coming shift to 42 V in automotive electrical systems. Several possible architectures are compared. Each has implications for power electronics and for the automotive system as a whole. Possibilities such as multiplexed power configurations, electric power steering, "light hybrid" vehicles, and others are explored.

Speaker Philip Krein is Director of the Grainger Center for Electric Machinery and Electromechanics in the Department of Electrical and Computer Engineering at the University of Illinois. He was an engineer with Tektronix in Beaverton,

Oregon, with responsibilities in analog design and product de-



velopment, before joining the faculty at Illinois. His research and teaching are in power electronics, electric vehicles and automotive systems, and electric machines. He is the author of an undergraduate textbook, "Elements of Power Electronics" (Oxford University Press,



1998), and served as faculty advisor for the University's Advanced Electric Vehicle student team. From 1997-98, he was a senior Fulbright Scholar at the University of Surrey, Guildford, UK. Dr. Krein is Past President of the IEEE Power Electronics Society and a Fellow of the IEEE. He holds seven U.S. patents.

Door Prizes

Sponsored by RRVS.

Meal/Reservations

Dinner will be a Chinese buffet from Yen Ching's in DeKalb. Please reserve your space, select your meal by calling Jennifer (jthomas@ceet.niu.edu) at 815-753-9974 or sending her an email by Monday, Nov 18, at noon. Please include the following information: your name, phone number, email address, IEEE member number and meal selection. The cost of the dinner is \$5 for members, \$10 for non-members, and \$2 for students.

Note

The meeting is open to the general public. You need not be an IEEE member. Guests are welcome. However, please call to enable us to make appropriate arrangements.

October Meeting Recap

At RRVS's October section meeting Professor Joe Entminan discussed



Programmable Logic Controllers (PLC). Mr. Entminan reviewed the history of PLCs including an early attempt to use Personal Computers (PCs) to control machinery.

As part of the presentation several different examples of PLCs were presented and discussed. Two different PLCs were demonstrated. The demonstrations consisted of actually programming a simple temperature control system using a graphical user interface that utilized icons being dragged and dropped into position and then connected in the desired order to create the control algorithm. The systems were then operated.

Also included in the presentation were examples of the latest PLCs available on the market that fit into the palm of a person's hand and cost less than ~\$100. Despite their small size and cost they still had advanced features such as fuzzy logic capability and self-tuning.

January Meeting Preview

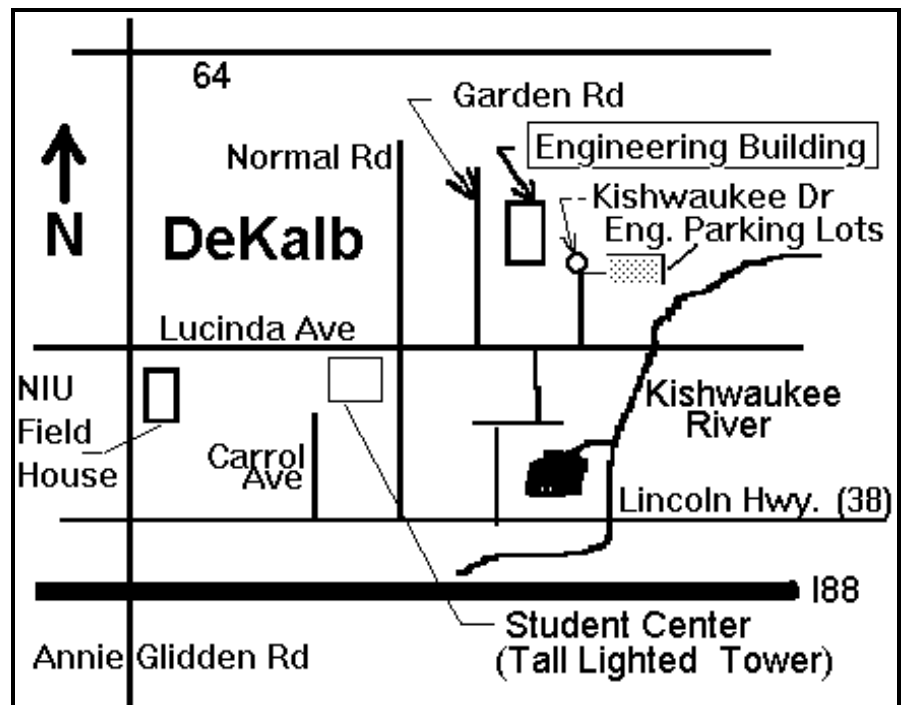
We are trying to line up a presentation on either Nanotechnology or 4D Ultrasound.

Chicago/Rockford IEEE Consultants' Network Meeting

The Chicago/Rockford IEEE Consultants' Network will be meeting on Monday, November 25, 2002, 7:30 - 9:00 PM at the Palatine Public Library, 700 North Court, Palatine, IL 847-358-1216. At 6:15 PM, we meet for dinner at Bakers Square. It is located at 270 E. Northwest Highway and North Court, just south of the library.

In addition to networking and sharing leads and referrals, on November 25, we plan to have an open discussion on "What Makes An Entrepreneur?" based on the article by Dave Lundy in the September 8, 2002 edition of the Chicago Sun-Times.

Members and non-members are invited to join us for the optional informal dinner and meeting. Information about the network can be obtained by e-mail: g.l.blank@ieee.org or visit our web site at <http://www.drblank.com/coaction.htm>



All Electronic Delivery of the RRVS Newsletter

The RRVS Newsletter is now available online. Members who would like to have a copy emailed to them, please send an email request to b.parro@ieee.org. Email notification of availability of the newsletter at the section website (see page 1, upper right corner) will be sent to all members with whom we have a valid email address on file. Please check for a valid email address.

Submissions to *Event Sense*

Send articles and job ads to the *Event Sense* editor, Bob Parro, via e-mail (preferred), or fax. Job ads will run for two consecutive months. Contact the *Event Sense* editor if the ad needs to run longer. Please make submissions by the twenty-fifth of the month. All submissions are subject to editing for style, clarity, and space considerations.

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*Messages for student officers can be left at the NIU Dept of
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Rock River Valley Section
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Calendar

November Section Meeting **November 21**
Prof Phil Krein (U of I) will discuss 42V Automobile Power at NIU in DeKalb

January Section Meeting **January 29**
TBD at Rock Valley College



Joint Computer/
Control Systems
Society Chapter
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