

November 2006

Rock River Valley Section

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Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

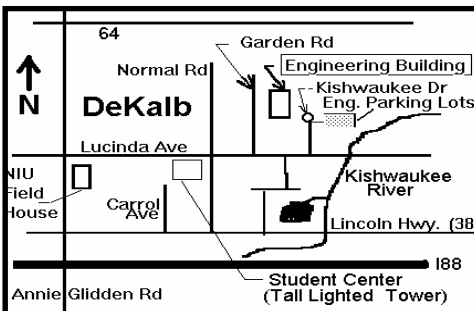
RRVS Section and IAS Chapter Meeting

Solar and Alternative Energy — Engineering Issues

When **Wednesday November 15, 2006**

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. Park-



ing will be in the engineering parking lot behind the engineering building. Parking passes are required and will be handed out at the Engineering building when you arrive.

Agenda

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

Program

The subject of "alternative" or "renewable" energy is one which typically evokes emotive and political responses, and these responses often have higher visibility than the engineering issues. This presentation provides a science/engineering overview of possible schemes presenting information which can help determine the viability of alternative energy sources for different situations. The

presentation emphasizes the two separate but equally important and complementary issues of energy provision and the efficiency of its use. The presentation will touch on the parallel issue of energy storage, including a few thoughts on the hydrogen economy, before concluding with a look at energy use in transportation, and hybrid vehicles.

Speaker

Dean Patterson was born and raised in the Southern Australian city of Adelaide, where he took his degrees from the University of Adelaide.

In 1984 he went to the remote tropical north of Australia, to the city of Darwin, to help set up a new university. He was responsible for the 4 year undergraduate degree program, the graduate degree program, and the establishment of a research focus. He immediately got involved in building solar cars for the three yearly races across Australia which began in 1987, so the research focus naturally ended up in the area of solar and alternative energy. He developed a high performance electric traction system for the solar vehicles, and focused his own research into high performance axial flux permanent magnet machines.

In 2001 he came to the USA, to the University of South Carolina as a research professor, working on the elec-

tric ship program of the US Navy, and in 2004 was invited to the University of Nebraska Lincoln, to help set up courses in Energy Studies

He is the author of about 100 technical papers. He is a Fellow of the Institution of Engineers Australia, and he has been very active in the Institution of Electrical and Electronic Engineers, (IEEE) Power Electronics Society, having just completed a 2 year term as President of that society.

His spin-off company from the Northern Territory University, developing high performance machines, was bought in 2006 by FASCO/TECUMSEH. He now divides his time between the company and university.

Meal Reservations

Dinner will feature a beef, pork, chicken and vegetable Chinese buffet. Please make your **dinner reservations** by calling **Tricia at 815-753-9974** or sending an email (**fisher@ceet.niu.edu**) by **Monday, November 13, at noon**. Please include the following information: your name, phone number, email address, and IEEE member number. Dinner is \$7 for members, \$5 for student members, \$11 for non-members and \$7 for non-member students. 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 Tricia at 815-753-9974 for questions.

