

Center for Power Systems Studies -- Annual Meeting
COORDINATOR'S REPORT
October 20, 2004

To: Members of Center for Power Systems Studies
Associate Members of Power Systems Studies
All those in attendance at this meeting

The Center for Power Systems Studies is entering into its 37th year of operation. Below is a summary of some of the past years power-related activities and events, since the semiannual meeting.

- I. Summer 2004: Faculty and Student Summer Projects/Research Update
- a. Under Steve Hietpas supervision, two graduate students worked on power electronic motor drives this summer. Each has been actively implementing/integrating dSPACE hardware/software systems within their designs.
 - b. Mike Ropp worked with several undergraduate students on projects associated with his NSF Career grant, coordinated efforts with respect to the WRAN sites, and took a dozen students on a field trip to the West Yellowstone Park to install a new PV array.
 - c. Steve Hietpas worked for the Dennis Helder through parts of the summer on the Ethanol project.

II. Fall 2004: Power-Faculty Course Update

a. Steve Hietpas

Fall

- 1. Assumed position of Program Coordinator for the Electrical Engineering Program
- 2. EE420 (3 cr) *Advanced Electronics III*, 9 students
- 3. EE430 (3 cr) *Energy Conversion*, 24 students

b. Michael Ropp

Fall

- 1. EE420 (2 cr) – *Engineering Economics*, 24 students
- 2. EE492 (3 cr) – *Power Electronics*, 24 students

III. Fall 2004: Scholarship Activity Update

Scholarship offerings are provided at the:

- Freshmen level (less than approximately 50 credits completed)
- Sophomore level (less than approximately 80 credits completed)
- Junior level (less than approximately 110 credits completed)

a. Recipients for Fall 04

Seniors	Juniors	Sophomore	Freshmen
Daniel McMahon	Jack Winter	Chris Iverson	Corey Kramer
Justin Dewald	Wes Wingen	Cody Anderson	Austin Hoekman
Jesse Walter*			James Galipeau

* Indicates recipient of the \$3000 Center for Power Systems Studies Award
Spring 05 applications are being submitted within the next six weeks.

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IV. Status of Power Students

a. Spring 2004 Power Graduate Update

Student	Place of Employment
Nate Jones	Southern Minnesota Municipal Power Agency
Kevin Doe	Cannon Technologies, MN
Mike McBride	WAPA, Huron
Paul Woodruff	Looking in the Boston area
Robert Soper	WAPA, Huron
Michael Runck	AGCO, Jackson, MN

Of 11 students that graduated in the spring, 4 declared power as their career path, which is 36% of the graduating seniors. From spring 2000 to present, 18 of 88, or 20.4% of SDSU EE graduates have either obtained or are pursuing a career in power.

b. Returning Power Students -- Summer Intern Update (2004)

Student	Place of Employment
Justin Dewald	Missouri River Energy Services
Wes Wingen	Energy Maintenance Service, Gary, SD
Jack Winter	WAPA
Daniel McMahon	Dr. Ropp
Jesse Walter	Daktronics
Chris Iverson	Daktronics
Cody Anderson	Brookings Municipal
Corey Kramer	Sioux Falls -- ?
Austin Hoekman	Hoekman Electric
Doug Larson	Unknown

V. Review of CPSS Impact

The student interest in the power area remains at a healthy level. Those activities which have the greatest impact on attracting students to the power area are:

- i. CPSS scholarships
- ii. Internship opportunities
- iii. Design projects relating to electric power area and power electronics
- iv. Special Speakers (Annual Banquet), Field Trips and the Power Technology Tour.
- v. Power System course offerings.

The major component that help to retain our power students are the internship opportunities. Over the last several years numerous CPSS companies have been able to offer such positions, which has had a wonderful impact on the program.

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VI. Positions in Power Industry

In the last month the following companies have contacted us to post positions on our EE website and are actively seeking to fill full-time engineering positions within their company.

- i. Black Hills Power
- ii. Interstates Company
- iii. POWER Engineers
- iv. Minnesota Power
- v. Allegheny Electric Cooperative

VII. Other scholarly/research activities related to power

a. Steve Hietpas

1. Serves on the paper review committee for IEEE Rural Electric Power Conference.
2. Serves on the review committee of IEEE Transactions on Industrial Applications associated with the Rural Electric Power Conference.
3. Continuing the Senior Design project involving a bidirectional AC<->DC power converter.
4. Advising four graduate students on activity involving the development of power electronic drives and the development of dSPACE rapid-prototype system software.
5. Will be teaching EE434, Power Systems Analysis, in the spring of 2005.

b. Michael Ropp

1. Actively working on the NSF-CAREER award for the next several years
2. Advising four power-related graduate student projects (renewable energy topics).
3. Continues to operate the Wind Resource Assessment Network.

Respectfully submitted,

Steven M. Hietpas, Ph.D.
Coordinator, Center for Power Systems Studies