

Center for Power Systems Studies
Semiannual Meeting – Rapid City, SD
COORDINATOR'S REPORT

April 29, 2004

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

We are now at the close the Center for Power Systems Studies' 36th year of operation. The following is a summary of the last several months of activity within the department of electrical engineering that is related to the CPSS.

I. Projects/research/academic activities during fall 2003 and spring 2004 terms

a. Courses taught spring semester

Steve Hietpas

1. Taught EE615 (3 cr) *Advanced Linear Systems*, 12 graduate students
2. Taught EE221 (3 cr) *Circuits II*, 15 students, ~ 3/15 students look interested in power systems.
3. Co-Taught EE292 (1 cr) *EE Tools*, 11 Students.
4. Advised EE692 (1 cr) Special Topics in Motor Drives and Simulink, 1 graduate student

Michael Ropp

1. Taught EE415 (3 cr) – *Linear Control Systems*, 23 undergraduate students
2. Taught EE465 (2 cr) – *Senior Design II*, 19 undergraduate students

II. Other scholarly/research activities

Steve Hietpas

1. Serve on the paper review committee for IEEE Rural Electric Power Conference. Reviewed papers for the upcoming conference in Scottsdale, AZ, May 23-25, 2004. Will attend conference.
2. Serve on the review committee of IEEE Transactions on Industrial Applications associated with the Rural Electric Power Conference.
3. Will attend and present poster at the 2004 ASEE Annual Conference, Salt Lake City, UT, June 21-24.
4. Advised three graduate students on design and thesis papers and research/scholarly related activity involving: DC 4-quadrant motor drive, AC-AC Converter, design of a 3-hp V/Hz 3-phase Induction Motor Drive using a dSPACE rapid-prototype system.

Michael Ropp

1. Began work on the NSF-CAREER award to develop two photovoltaics projects over the next five years.
2. Initiated a new photovoltaics project in Yellowstone park, to be installed in summer 2004, and acquired the PV array for the project (paid for by an UNPEPP grant). The PV array is 7.6 kW, and the modules are in the Park at present.
3. Continuing four power-related graduate student projects (renewable energy topics).
4. Continued to operate the Wind Resource Assessment Network.
5. Invited reviewer for NSF renewable energy proposals.

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III. Scholarship Activity

Continued the offering of *scholarships* to:

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

Recipients for Spring 04

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

* Indicates recipient of the \$3000 Center for Power System Studies Award

Recipients for Fall 03

Seniors	Juniors	Sophomore	Freshmen
Jonathan Kennedy	Daniel McMahon	Wes Wingen	Corey Kramer
Mike McBride	Adam Fenski	Jack Winter	Cody Anderson
Nate Jones*	Jesse Walter		
Paul Woodruff	Justin Dewald		
Justin Brech			
Robert Soper			

* Indicates recipient of the \$3000 Center for Power System Studies Award

IV. Graduating Power Students (Fall and Spring) and Summer 2003 Intern Positions

a. Fall 2003 Power Graduates:

Student	Place of Employment
Jon Kennedy	Black & Veatch

b. Spring 2004 Power Graduates:

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

Of 25 students graduating in the fall of 2003 and the spring of 2004, 7 have declared power as their career path, which is 28% of the graduating seniors. From spring 2000 to present, 25 of 113, or 22% of SDSU EE graduates have either obtained or are pursuing a career in power.

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c. Summer 2004 Power Student Interns.

Student	Place of Employment
Justin Dewald	Missouri River Energy Services
Wes Wingen	Energy Maintenance Service, Gary, SD
Jack Winter	Missouri River Energy Services
Daniel McMahon	SDSU/Mike Ropp
Jesse Walter	Daktronics
Cody Anderson	Brookings Municipal Utilities
Chris Iversen	Daktronics
Corey Kramer	Electrician, Sioux Falls
Austin Hoekman	Hoekman Electric

V. Summer Activity

Steve Hietpas

1. Will supervise Ankur Singhal on design of 3-hp Volts/Hz AC Induction Motor Drive – controller approaches, and integration of dSPACE, Sriramulu Pasikanti on the design of closed-loop controlled AC-AC Converter, and Santosh Bhattarai, on the design of a 4-quadrant motor drive, with closed-loop control using dSPACE.
2. Work for Dennis Helder in June and July (Instrumentation design, AGE85 aircraft project)
3. Power technology tour in August

Michael Ropp

1. Wind Resource Assessment Network
2. Supervising eight graduate students on numerous projects
3. NSF-CAREER award
4. Yellowstone PV array installation with students in August

Respectfully submitted,

Steven M. Hietpas, Ph.D.
Coordinator, Center for Power System Studies
Associate Professor of Electrical Engineering