

Center for Power Systems Studies
Spring Meeting – Sioux City, IA
COORDINATOR'S REPORT
April 16, 2009

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

We are now at the close the Center for Power Systems Studies' 41st year of operation. The following is a summary of the last several months of activity within the department of Electrical Engineering and Computer Science that is related to the CPSS.

I. Spring 2009 Power-Faculty Course Update

Steve Hietpas

- a. EE315 (3 cr) *Linear Controls*, 18 students.
- b. EE221 (3 cr) *Circuits II*, 18 students.
- c. EE221L (1 cr) *Circuits II Lab*, 18 students.

Mike Ropp

- a. EE434 (3 cr) *Power Systems Lab*, 12 students from SDSU, and 7 students from SDSMT.
- b. EE434L (1 cr) *Power Systems Analysis Lab*, 12 students from SDSU, and 7 students from SDSMT

II. Fall 2009 Power-Faculty Course Plans

Hietpas

- EE430/430L (3-1 cr) *Electromechanical Systems and Lab*, 21 students
- EE464/464L (2 cr) *Senior Design I*

Ropp

- EE492/592 (3 cr) *Power Electronics*

III. Other Activities During Spring Semester

Hietpas

- a. Serve on the board for the SDEC.
- b. Reviewed papers for IEEE Transactions on Education, IEEE, REPC, IEE, and ASEE.
- c. Advisor to one MS graduate student in the design of an FPGA Based Induction Motor Drive
- d. Advisor to one MS graduate student graduate student on power fault location for distribution systems, in collaboration with Cooper Power. Student will defend his thesis on April 27th.
- e. Advisor to one MS graduate student in the design of a Permanent Magnet AC Motor Drive
- f. Undergraduate program coordinator for electrical engineering

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- g. Formed and advising the first Robotics Team in the electrical engineering program. Competed in the Fire Fighting Home Robot Contest at Trinity College, Hartford, CT on April 3-5.
- h. Writing the Self Study for the EE Program's ABET visit this fall of 2009

Ropp

- a. Wind Resource Assessment Network continues to operate 12 sites. We now get perhaps a half-dozen new requests for data per month from windpower developers alone, on top of the requests from landowners, policy makers, researchers, and others.
- b. Supervising two power-related MSEE graduate students, and the first Ph.D. graduate power student.
- c. Still working on defining spring 2010 PV in the Parks project.
- d. Currently participating in three DoE Solar Energy Grid Integration Systems (SEGIS) projects, an Xcel Energy RDF-sponsored project, and am working on a project with Bonneville Power Administration.
- e. Presented at the Minnesota Power Systems Conference in November 2008.
- f. Continuing to serve on the board of the South Dakota Energy Infrastructure Authority. (Activity currently suspended; no budget from the State.)
- g. Balloting member of IEEE-1547; soon to be committee member for IEEE-1547.7.
- h. Working with WECC officials to define procedures for large-scale modeling of grid-tied PV systems.
- i. Pursuing power-related economic development activities for eastern SD.

IV. Scholarship Activity

Recipients of CPSS Scholarships for Fall 08 and Spring 09

Seniors	Juniors	Sophomore	Freshmen
Kirby Wicks*	Steve Cozine	Fistum Mekuria	
Aric Lowe	Tyler Duffy		
Todd Bockorny	Joseph Dold		
Corey Kramer			
Christopher Graff			
Eric Boese			
Tyler Wulf			
Derrick Galinat			
Jay Groninger			

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

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Recipients of **CPSS Scholarships** for Fall 09 and Spring 10

Seniors	Juniors	Sophomore	Freshmen
	Steve Cozine*	Neil Albares	Jared Onnen
	Benjamin Pierson	Chaker Joanne	
	Gregory Zimmerman		

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

Students that were recipients of power-related scholarships through **EE Open Scholarships**

Seniors	Juniors	Sophomore	Freshmen
Derrick Galinat	Ben Jasinski	Bradley Seely	Brad Henning
Mark Braaksma	Steve Cozine	Mark Matthews	LJ Dudley
	Landen Geerdes	Ben Kampmann	Derek Waldner
		Kaitlin Stanton	

Students that were recipients of power-related scholarships through **College of Engineering Open Scholarships**

Seniors	Juniors	Sophomore	Freshmen
	Landen Geerdes		
	Benjamin Pierson		

V. Status of Power Students

a. Power Graduates Update

Student	Graduation Semester	Place of Employment
Chris Graff	Fall 2008	T & R Electric, Coleman, SD
Steve Grantz	Fall 2008	Patrick Energy Services (Chicago, IL)
Kirby Wicks	Spring 2009	Currently at Interview Stage
Brady Nesvold	Spring 2009	Xcel Energy, Monticello, MN
Corey Kramer	Spring 2009	NorthWestern Energy, Aberdeen, SD
Jon Aus	Spring 2009	Electrical Consultants, Inc., Billings, MT
Eric Boese	Spring 2009	Electrical Consultants, Inc., Billings, MT
Aric Lowe	Spring 2009	Electrical Consultants, Inc., Mankato, MN
Luke Weyer	Spring 2009	Brooks Borg Skiles Architecture Engineering LLP, Des Moines, IA

Of the 21 students that graduated in 2008-2009, 9 obtained employment in the power sector, which is 43% of this graduating class. From the spring of 2000 to present, 59 of 253 (approximately 23%) of SDSU EE graduates either obtained or have pursued a career in the power industry.

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b. Summer Positions, Engineering Internships, or Cooperatives

Student	Summer Place of Employment	Expected Graduation
Mark Braaksma	RH2 Engineering, Inc. Bellingham, WA	Fall 2009
Todd Bockorny	DeWild Grant Reckert, Rock Rapids, IA	Fall 2009
Joseph Dold	AST, Brookings, SD	Spring 2010
Ben Pierson	Seeking employment with Sioux Valley Energy	Spring 2010
Gregory Zimmerman	Wind Application Center, SDSU, ME Dept.	Spring 2011
Bradley Seely	Seeking power internship	Spring 2012
Reece Chambers	Brosz Engineering Inc. Pierre, SD	Spring 2013

VI. Summer Activity

Steve Hietpas

1. Supervise two MS students
2. Undergraduate EE Program Coordinator May-July.
3. Preparation for ABET review in fall of 2009
4. Power Technology Tour, August 10-14.
5. Begin preparations for 2010 Biannual CPSS South Dakota Regional Power Conference

Michael Ropp

1. Wind Resource Assessment Network
2. Supervise two MS and one Ph.D. students on various projects
3. DoE Solar Energy Grid Integration Systems (SEGIS), Xcel Energy, Bonneville Power Administration projects.
4. Preparing for Summer 2010 PV in the Parks project.

Respectfully submitted,

Steven M. Hietpas, Ph.D., P.E.
Coordinator, Center for Power Systems Studies
Professor of Electrical Engineering