IGERT* External Advisory Committee Meeting

April 6, 2011
ECJ 10th floor
UT-Austin

*Integrative Graduate Education and Research Traineeship Program
### Wednesday, April 6:

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>8:15</td>
<td>Continental Breakfast</td>
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<td>8:45-9:00</td>
<td><strong>Welcome</strong>, Greg Fenves, Dean of Engineering</td>
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<td>9:00-9:15</td>
<td><strong>Introduction of Advisory Committee, UT Investigators, and Program Overview</strong>, Tom Edgar</td>
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<td>9:15-9:45</td>
<td><strong>Pecan Street Project</strong>, Tom Edgar and Brewster McCracken</td>
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<td>9:45-10:05</td>
<td><strong>IGERT Trainee Presentations</strong> <em>(4 min. each)</em></td>
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<td>Akshay Sriprasad</td>
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<td>Hunter Estes</td>
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<td>Matthew Charlton</td>
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<td>Gregory Dahlberg</td>
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<td>10:05-10:30</td>
<td><strong>IGERT Affiliates</strong> <em>(3 min. each)</em></td>
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<td>Amir Toliyat</td>
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<td>Wesley Cole</td>
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Wednesday, April 6 continued:

10:30 Break

10:45 Cornell IGERT Program, Jeff Tester

11:00-12:00 Discussion of interdisciplinary curriculum, recruitment, outreach, and website
   Educational Plan – Michael Webber (30 min)
   Recruiting Efforts – Pam Cook (10 minutes)
   Outreach – Pam Cook (10 minutes)
   IGERT Website – Tom Edgar (10 minutes)

12:00-1:00 Lunch and Trainee Poster Session

1:00-1:45 Meeting of Advisory Committee with IGERT Trainees, Pam Cook and Darlene Yanez

1:45-2:00 Break

2:00-3:00 Write up program evaluation report

3:00-3:30 Discuss evaluation with IGERT Executive Committee

3:30 Meeting adjourned
External Advisory Committee Members

Pat Chapman  
Mike Hightower  
John Hoffner  
Bill Kramer  
Brewster McCracken  
Karl Rábago  
Peter Sauer  
Noel Schulz  
Jeff Tester

Solarbridge  
Sandia National Labs  
CH2M Hill  
NREL  
Pecan Street Project  
Austin Energy  
University of Illinois U-C  
Kansas State University  
Cornell University
UT – Austin IGERT Grant Overview

Sustainable Grid Integration of Renewable and Distributed Resources

- 20 faculty from Architecture, Engineering, Business, Law, and LBJ School and 11 IGERT Fellows/year ($3 million over 5 years)
- Student research projects to be carried out in areas of power distribution, energy storage, business utility/consumer models, systems modeling and integration, and building-integrated solar energy
- Coordination of interdisciplinary course sequence from the five schools
- Based around goals of the Pecan Street Project
- Internships in industry/government organizations and study abroad (TU München)
- Two other IGERT grants at UT (Indoor Air and Nanotechnology)
Executive Committee

• **Ross Baldick**, PI
  Electrical and Computer Engineering

• **Thomas Edgar**, Co-PI/Administrator
  Chemical Engineering

• **Suzanne Barber**, Co-PI
  Electrical and Computer Engineering

• **Alexis Kwasinski**, Co-PI
  Electrical and Computer Engineering

• **Michael Webber**, Co-PI
  Mechanical Engineering
Participating Faculty

• David Adelman
• David Allen
• John Butler
• Ulrich Dangel
• James Dyer
• Matt Fajkus
• Mack Grady
• Robert Hebner
• Kara Kockelman
• Arumugam Manthiram
• Jeremy Meyers
• Buddie Mullins
• Atila Novoselac
• Rod Ruoff
• Surya Santoso
• Alexandre da Silva
Administration

• Pam Cook, Project Coordinator

• Darlene Yanez, Assessment Coordinator

• Sarah De Berry-Caperton, Administrative Associate
IGERT Trainees

• **Akshay Sriprasad** – Chemical Engineering (T. Edgar)

• **Hunter Estes** – Electrical and Computer Engineering (A. Kwasinski/R. Hebner)

• **Matthew Charlton** – Materials Science and Engineering (R. Ruoff)

• **Dave Tuttle** – Electrical and Computer Engineering (R. Baldick)

• **Gregory Dahlberg** – Electrical and Computer Engineering (A. Kwasinski)
Affiliates

- **Steve Bourne** – Civil, Architectural, and Environmental Engineering (A. Novoselac)
- **Wesley Cole** – Chemical Engineering (T. Edgar)
- **Robert Fares** – Mechanical Engineering (J. Meyers)
- **Kody Powell** – Chemical Engineering (T. Edgar)
- **Josh Rhodes** – Mechanical Engineering (M. Webber)
- **Amir Toliyat** – Electrical and Computer Engineering (A. Kwasinski)
- **Charles Upshaw** – Mechanical Engineering (M. Webber)
Timeline

• PSP organizing meeting 1/28/09
• IGERT (UT) competition 2/17/09
• Pre-proposal submitted (9 pgs) 3/12/09
• IGERT reviews received 6/13/09
• Full proposal submitted (25 pgs) 9/15/09
• Proposal funded 3/2/10
• Final budget approved 5/14/10
Pecan Street Project
Mueller Demonstration Project

• DOE Smart Grid Funding $10.4 million + $15 million matching/infrastructure (12/2009), also CAPCOG, Doris Duke Foundation

• Five-year project at old Mueller airport site – joint development between City of Austin and Catellus Development Group

• Project Team includes Austin Energy, UT, Environmental Defense Fund, City of Austin; advisory groups include ERCOT and central Texas utilities

• Data collection from pilot group of homes to see how various technologies affect electricity usage, bills, utility finances, environmental outcomes, and overall system performance

• Two-way Energy Internet; Plug and play open platform

• Industrial affiliates program initiated
IGERT Curriculum

• Many courses already offered at UT

• New courses developed, course modification

• Student advising

• Detailed discussion at 11:00 (M. Webber)
IGERT Enrichment

• Weekly meetings and presentations (since 10/10)

• Ethics seminar (2/2011)

• Study abroad (May-June, 2011) – TU Munich (Werner Lang – liaison)

• IGERT Project: Church energy audit (March-May, 2011)

• Outreach events
New Student Recruitment

- IGERT website operational (on-line application)
  
  - [http://research.engr.utexas.edu/igertsustainablegrids](http://research.engr.utexas.edu/igertsustainablegrids)

- 2010 class (existing UT students nominated by faculty)

- 2011 class (selection of students who have applied)

- 2012 class (outreach to targeted schools)