

## Monthly CREW Update: September 2010

Here is an update on recent, current, and upcoming activities and opportunities:

1. Our first CREW seminar for this academic year was given on August 31 by Professor Michael Amitay of Rensselaer Polytechnic Institute. He gave a very interesting talk on how flow control can be used to reduce vibrations in wind turbine blades. There were technical difficulties with the network in the wing where our seminar room was, and it was not possible to broadcast the seminar live. However, the seminar was recorded, and for those who missed the talk, you may view the talk at:

<http://echo360.colorado.edu:8080/ess/echo/presentation/4fc650a5-a151-4bd7-9182-748143a9169d>

2. Our next CREW seminar will be at 4pm on Friday, October 1, in Room ECCS 1B28 in the CU Engineering Center. Professor Kim Stelson from the University of Minnesota will be talking on "Hydrostatic Transmission of Wind Power" which provides an alternative to mechanical transmissions through the use of gear boxes. Professor Stelson will also provide brief overviews of University of Minnesota's DOE-funded wind power research center as well as their NSF Engineering Research Center for Compact and Efficient Fluid Power (CCEFP). More information about his seminar can be found at: [http://crew.colorado.edu/Newsroom/Events/2010Fall\\_Seminar2\\_KimStelson\\_UnivMinnesota\\_Oct1.pdf](http://crew.colorado.edu/Newsroom/Events/2010Fall_Seminar2_KimStelson_UnivMinnesota_Oct1.pdf)

3. There will be a Sustainable Energy and Atmospheric Sciences seminar at 3pm on September 23 at NOAA (at the David Skaggs Research Center, Room GC402) overviews two recent, large feasibility and integration studies conducted by the Department of Energy and the National Renewable Energy Laboratory, with contributions from private companies. These studies examine the costs, challenges, impacts, and benefits of achieving high penetration levels of weather- and climate-dependent renewable energy, i.e., wind and solar energy, in the nation's energy systems.

If you plan to attend and do not work at NOAA, please contact Holly Palm (Holly.Palm@noaa.gov) at least one day in advance, so that she can give your name to the security office to facilitate your entrance to NOAA. Visitors must have photo identification. International attendees are required to present a passport. Please see <http://www.esrl.noaa.gov/about/visiting.html> for a map and instructions on visiting. Please aim to arrive by 2:30 or so, to allow time to get through security, and then enjoy coffee and cookies while meeting your old and new wind-energy and solar-energy colleagues.

4. New from the publishers of NASA Tech Briefs and Green Design & Manufacturing, Solar & Wind Power is a digital magazine focused on alternative energy innovations. Enjoy the premiere issue at

[http://link.abpi.net/l.php?20100715\\_solar03](http://link.abpi.net/l.php?20100715_solar03)  
and look for the next one in March 2011.

5. A recent Letter to the Editor in the Denver Business Journal talks about the advantages of wind energy in terms of water saved:

<http://denver.bizjournals.com/denver/stories/2010/07/19/editorial4.html>

6. The Joint Institute for Strategic Energy Analysis (Joint Institute) announces its 2011 research funding opportunity, the 2011 Innovative Research Awards. Proposals for the awards which are available for up to \$50,000 are due October 12, 2010. For review planning purposes, proposers are asked to submit a brief pre-application by September 27, 2010. The Joint Institute's Innovative Research Award Program provides funding for collaborative teams from our founding partner institutions: the National Renewable Energy Laboratory (NREL), Massachusetts Institute of Technology (MIT), Stanford University, University of Colorado (CU), Colorado School of Mines (CSM), and Colorado State University (CSU). Accepted projects will focus on analytical research that works toward a more sustainable global energy economy. Participating teams must be collaborative, consisting of at least one NREL principal investigator and at least one principal investigator from one of the partner institutions. To help with collaboration, a LinkedIn Group has been created called "JISEA 2011 Innovative Research Awards." Researchers can post ideas and requests for collaborators to the discussion board. It will be open only to those who have an e-mail address from one of the six founding institutions. NREL staff can also contact the Joint Institute for collaboration suggestions. For more background on the program and the application process, access the award program page on the Joint Institute Web site at <http://www.jisea.org/>

7. The Workshop on Environmetrics, which is co-chaired by CREW faculty member Mandy Hering of CSM, will be held October 14-16 at NCAR. The workshop covers state-of-the-art applications and statistical methods needed to assess the impacts of climate change on health and renewable energy. Sessions on applications include recent advances in climate change research, impacts on human health, and challenges in development and penetration of renewable energy. A theme of the conference is "Space-Time Statistics to Evaluate the Impacts of Climate on Health and Renewable Energy" and many of the renewable energy discussions will be focused on wind energy. For more information, see <http://www.stat.purdue.edu/envr2010/>

8. Clipper Windpower has a job opening for a Controls Engineer who will be based in the Clipper design engineering offices in Carpinteria, California supporting the prototyping, testing, and validation activities and any production issues that might require design engineering input. The successful candidate will support the technical design and implementation of turbine control algorithms. An advanced degree in Electrical/Aerospace/Mechanical Engineering or in a closely related engineering discipline is desired, as well as background on analytical and mathematical control system skills. For more information, go to:

[http://clipperwind.hodesiq.com/job\\_detail.asp?JobID=2052745](http://clipperwind.hodesiq.com/job_detail.asp?JobID=2052745)

9. I wrote about this in the June 2010 CREW update, but the CLEAN investigators are still in need of a few more reviews. The Climate Literacy and Energy Awareness Network (CLEAN) was awarded a three year NSF grant under the National STEM Digital Library and Climate Change Education programs to identify, review and promote

exceptional climate change educational materials. The investigators for this CLEAN Pathway project are members of TERC Inc. (Cambridge, MA), NOAA (Washington, DC), the Cooperative Institute for Research in Environmental Sciences (Boulder, CO), the National Renewable Energy Lab (Golden, CO), and the Science Education Resource Center (Northfield, MN). CLEAN is looking for researchers/experts to review the following online resource:

\* As the Rotor Turns: Wind Power and You

( <http://www.teachersdomain.org/resource/psu06-e21.sci.rotor/> )

If you have time to provide a review, please complete the attached "scorecard" and email your review directly to Mark McCaffrey (Mark.McCaffrey@Colorado.EDU). Mark would like to receive reviews by September 30, 2010 if possible.

Happy September to all!