

SFI weekly newsletter for the week of November 30, 2009
A weekly service of SFI



Details of these headlines are posted on the SFI website at <http://www.sfi.mtu.edu/news-newsletter.php>

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2. PhD Defense: Mark Rowe, Environmental Engineering Tuesday, December 8, 2009 DOW 875 9:00 am
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2. NSF Energy for Sustainability
3. NSF Ecosystem Science
4. Environmental Education Grants

STUDENT OPPORTUNITIES: JOBS & POST DOCS, INTERNSHIPS, FELLOWSHIPS, and SCHOLARSHIPS

1. Nominations Open for the DeVlieg Foundation Graduate Fellowships due by 4 p.m., Thursday, Feb. 4.
2. U.S. Department of State now accepting applications for the 2010 Summer Clerical Program Deadline is Jan 4.
3. PhD IGERT Fellowships in Watershed Science and Policy at Southern Illinois University Carbondale
4. Global Change Education Program
5. Sustainability Manager, Portland CC
6. Assist Dir, Grad Prgm on the Env, The Evergreen State College
7. Environmental Education Assistant, Eastern Kentucky U
8. Professor of Renewable Energy, Florida Gulf Coast U

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NEW RESOURCES

EVENTS & CONFERENCES

In an effort to increase recognition and enhance SFI's image, we want to include more publicity about SFI member achievements. Please send announcements of your publications, presentations, awards, and names of awarded proposals to Denise Heikinen at dmheikin@mtu.edu.

SFI NEWS AND ANNOUNCEMENTS

1. Century II Campaign Endowed Equipment Fund Awards

The Michigan Tech Century II Campaign Endowed Equipment Fund committee awarded SFI members Claudio Mazzoleni (Physics) and Judith Perlinger (CEE) \$5,000 for a submicron aerosol generator for interdisciplinary research applications. The Michigan Tech Century II Campaign Endowed Equipment Fund is a program aimed at providing equipment money to improve the lives of faculty, staff and students campus-wide. The program is supported by the Michigan Tech Fund through donations by individuals and organizations.

2. Call for Papers: The ASCE Journal of Professional Practice in Engineering Education and Practice

is soliciting papers for a *Special Edition on Sustainability Education in Civil and Environmental Engineering*.

Deadline: March 15th, 2010

Papers are being solicited both for the Peer-Reviewed Technical Paper Section and for a More Practice-Oriented Forum Section. As is the nature of sustainability, the paper topics may cover a vast range of issues, with a focus on educational application and research. Some example items may relate to:

- Incorporation into existing undergraduate and graduate classes
- Development of new courses with a sustainability focus
- Mechanisms for conveying sustainability metrics into design courses
- Continuing education opportunities
- Enhancement in the K-12 arena
- Evaluation of sustainability topics which would benefit civil engineering education and practice
- Evaluation of novel techniques for sustainability education, particularly with respect to understanding and analyzing the complex and dynamic systems of sustainability

Please submit the manuscript electronically at <http://www.editorialmanager.com/jrneieng/>

By March 15th, 2010 and include a cover letter which designates it for this special issue and specifies whether it is for the technical paper or the forum section.

3. Spring Environmental Diplomacy and Law course MWF 11-12. CRN 14044 SS 5635

- A) what are some of the major treaties and court cases?
- B) how are these treaties negotiated and then monitored?
- C) how are international agreements implemented?
- C) are any of these arrangements effective?
- D) are there any general principles of international env law?

4. In Print SFI Scholars Deborah Huntzinger (GMES) and Thomas Eatmon

Deborah Huntzinger (GMES) and Thomas Eatmon, both former SFI IGERT scholars, have published "A Life-Cycle Assessment of Portland Cement Manufacturing: Comparing the Traditional Process with Alternative Technologies" in the Journal of Cleaner Production, 17(7), pp. 668-675, 2009. Huntzinger is a recent PhD graduate who is now at the University of Michigan, and Eatmon is at Allegheny College.

5. Beyond Grey Pinstripes awarded to Michigan Tech School of Business and Economics

On November 6, Aspen CBE held its biennial awards breakfast celebrating the schools ranked among the Global 100 in its Beyond Grey Pinstripes alternative ranking. Beyond Grey Pinstripes is a research survey and alternative ranking of business schools that spotlights innovative full-time MBA programs leading the way in the integration of

issues concerning social and environmental stewardship into the curriculum. Once again, Michigan Tech. U. School of Business and Economics ranked in the top 100 with a ranking of 58th.

SUSTAINABILITY NEWS

1. Michigan State U Starts Green Certification Program

Michigan State University has launched a Green Certification Program that recognizes departments, programs, and individuals on campus for their efforts towards sustainability. In order to receive certification, an entity has to show steps they are taking to reduce MSU's environmental impact through energy efficiency and conservation, waste reduction and recycling, water conservation, and/or purchasing.

http://statenews.com/index.php/article/2009/11/msu_starts_ecofriendly_certification_program

2. Grand Valley State U Names ED of Renewable Energy Center

Grand Valley State University (MI) has named T. Arnold Boezaart as the second executive director of the Michigan Alternative and Renewable Energy Center (MAREC). Boezaart previously served as the vice president for Grant Programs for the Community Foundation for Muskegon County. In that role, he handled a project that put a wind energy turbine atop the Frauenthal Center in downtown Muskegon. Boezaart, who has been serving as the interim executive director of MAREC since April, hopes to focus MAREC's attention on job creation in the green economy.

<http://www.gvsu.edu/gvnow/index.htm?articleId=127B41FB-E99F-5F21-5C50A36DA3DBEED0>

3. Eastern Illinois U to Replace Coal with Biomass

Eastern Illinois University has announced a partnership with Honeywell to complete a \$79 million renewable energy and building retrofit program. The project, which will combine energy-efficient facility upgrades with biomass-fueled heating plants, will help EIU address deferred maintenance, improve its infrastructure, and save approximately \$140 million in energy and operating costs over the next two decades. The focal point of the program is the construction of a new steam plant on the southeast corner of campus that will be driven by two large biomass gasifiers. The plant will use wood chips sourced from the local logging industry to generate steam and heat buildings on campus, and it will replace the University's aging steam plant, which consumes more than 10,000 tons of coal per year and requires constant maintenance. EIU will finance the improvements and use the savings, guaranteed by Honeywell through a 20-year performance contract, to pay for the work.

<http://www.eiu.edu/~pubaff/headline/2009/1120200995.php>

4. Intl Society of Sustainability Professionals Competency Survey

The International Society of Sustainability Professionals (ISSP) has announced a call for participation in its research project to determine the core competencies needed by sustainability professionals. ISSP hopes that the results of the research will help bring cohesion and definition to the emerging profession, inform the design of educational programs, and help sustainability professionals prepare for their futures. The survey will take about 15-20 minutes to complete, and all participants will be eligible to win a \$150 credit toward ISSP membership or classes.

http://www.surveywriter.net/in/DM_sw5_2.asp?StartQcnt=1&unq=0.5767023&GUID={0C82CE0D-5AAB-43D1-9B81-866BA17C928D}

SEMINARS

1. Brandon Ellefson S-STEM Scholar Monday, December 7, 2009

Department of Civil and Environmental Engineering

Environmental Engineering Seminar Series

Dow 642

3:00 pm

2. PhD Defense: Mark Rowe, Environmental Engineering Tuesday, December 8, 2009 DOW 875 9:00 am

Judith Perlinger, Advisor

Development of Measurement and Modeling Techniques to Quantify Atmospheric Deposition of Persistent, Bioaccumulative and Toxic Chemicals in the Great Lakes

3. PhD Defense: Valerie Fuchs, Environmental Engineering Tuesday, Dec 8, DOW 875

3:00 pm

John S Gierke & James R Mihelcic, Advisors

Nitrogen Removal and Sustainability of Vertical Flow Wetlands for Small-Scale Wastewater Treatment

4. Dr. Chris Fairall, NOAA Earth System Research Lab, Boulder, CO Fisher 138

2:00 pm

Website: <http://cires.colorado.edu/people/fairall/>

Air-sea fluxes - light winds to hurricanes

EPSSI bonus seminar

5. Renewable Energy Electric Grid Integration Seminar Thursday, December 10, at 10 am in Rehki G05

by Rush Robinett of Sandia National Labs

This presentation will discuss the issues of integrating large percentages of renewable energy sources into the electric grid. In particular, the replacement of fossil fuel burning generators with intermittent renewable energy sources requires the development of energy storage and feedback control systems to create a "Smart Grid".

Basically, the Smart Grid is replacing the brute force, dispatchable electricity generation of fossil fuel with information flow in the grid. A high-level overview of the Department of Energy's Solar Photovoltaics Program approach to this problem will be discussed to set the stage for the development and application of advanced nonlinear control system concepts to meet the needs of a Smart Grid.

Dr. Robinett is visiting the mechanical engineering department. Contact Michele Miller (7-3025) for more info.

FUNDING & AWARD OPPORTUNITIES

To submit research proposals through the Sustainable Futures Institute, add "SFI" to the DEPT/CENTER/INSTITUTE(S) column for identifying the PI's and co-PI's. SFI Director, David Shonnard, will sign the transmittal sheet on page 3. (If David Shonnard is unavailable for signing transmittal sheets, Rick Donovan can also sign for SFI). Submitting proposals under SFI provides wider publicity and recognition for your research as well as a 10% return on your incentive account. Please feel free to contact SFI in regards to proposal development – SFI can serve as a "hub" for bringing together different faculty, merging concepts related to sustainability, providing literature review assistance, etc.

1. Public Great Lakes RFP Webinars Wednesdays, Dec. 9 and Dec. 16, 2009

RFP webinars for clarification of the Great Lakes Restoration Initiative Request for Proposals

http://epa.gov/greatlakes/fund/2010rfp01/2010rfp01_webinar.html

10:00 am – 12:00 pm

2. NSF Energy for Sustainability

Amount \$100,000

Deadline Mar 03, 2010

This program supports fundamental research and education in energy production, conversion, and storage and is focused on energy sources that are environmentally friendly and renewable, including sunlight, wind/wave, biomass, and geothermal. Hydrocarbons, alcohols, and hydrogen are potential energy carriers that can be derived from renewable sources. Potential sources of hydrogen include conversion from biomass and from electrolysis, photolysis or thermolysis of water. Critical components of fuel cells requiring additional research include catalysts and electrolytes. Development of these components also requires fundamental research on the reaction and transport mechanisms at the catalyst and membrane electrolyte interface. Advances in these areas are needed to address key challenges in efficiency, durability, power density, and environmental impacts. The engineering aspects of fuel-cell design and operation also require further study in areas such as water and thermal management. Wind power is a growing source of electrical energy. Photovoltaic devices have the potential to supply a significant fraction of electrical energy to the power grid. Although silicon-based materials have been most widely used, other semiconducting, quantum and organic materials also have potential. New materials and novel fabrication techniques for solar energy conversion are supported by the program.

<http://fundingopps.cos.com/cgi-bin/fo2/getRec?id=103126>

3. NSF Ecosystem Science

Deadline Jan 09, 2010

No Amount listed

The Ecosystem Studies Program supports investigations of whole-system ecological processes and relationships across a diversity of spatial and temporal (including paleo) scales in order to advance understanding of (1) material and energy fluxes and transformations within and among ecosystems; (2) the relationships between structure, including complexity, and

functioning of ecosystems; (3) ecosystem dynamics and trajectories of ecosystem development through time; and (4) linkages among ecosystems at different spatial and temporal scales.

<http://fundingopps.cos.com/alerts/28861>

4. Environmental Education Grants

Deadline: Dec 15th

EPA's Environmental Education Division (EED), Office of Children's Health Protection and Environmental Education
The Grants Program sponsored by EPA's Environmental Education Division (EED), Office of Children's Health Protection and Environmental Education, supports environmental education projects that enhance the public's awareness, knowledge, and skills to help people make informed decisions that affect environmental quality. EPA awards grants each year based on funding appropriated by Congress. Annual funding for the program ranges between \$2 and \$3 million. Most grants will be in the \$15,000 to \$25,000 range.

<http://www.epa.gov/enviroed/grants.html>

STUDENT OPPORTUNITIES: JOBS & POST DOCS & INTERNSHIPS, FELLOWSHIPS, SCHOLARSHIPS and CFPs

1. Nominations Open for the DeVlieg Foundation Graduate Fellowships due by 4 p.m., Thursday, Feb. 4.

This year, the DeVlieg Foundation will provide \$3,000 for up to four doctoral students and \$1,500 for two master's students in support of research in engineering or a closely related field. Only US citizens are eligible for the fellowships, which may be used to supplement other fellowships or assistantships. Each graduate program may nominate up to two doctoral students and one master's student.

Nominees should provide the following information:

- * a completed application form, [click here](#) .
- * a curriculum vita
- * a brief description (no more than one page) of the student's research topic and intended use of the funds
- * a letter of support from advisor describing the merit of the candidate

Students will submit a completed application to their graduate program director:

<http://www.mtu.edu/gradschool/programs/directors/> .

Each graduate program may set its own internal deadline for review. Graduate programs will deliver completed applications to the Graduate School in either paper or electronic format. If delivered as an electronic document, email a PDF to Debra Charlesworth at ddc@mtu.edu . Complete details regarding the review process can be found online at <http://www.mtu.edu/gradschool/administration/academics> .

2. U.S. Department of State now accepting applications for the 2010 Summer Clerical Program Deadline is Jan 4.

To qualify for a Summer Clerical position, you must be:

- * a U.S. citizen, age 16 or older at time of appointment.
- * be enrolled or accepted for enrollment as a degree (diploma, certificate, etc.,) seeking student.
- * taking at least half-time academic/vocational/or technical course load in an accredited high school, technical or vocational school, 2-year or 4 year college or university, graduate or professional school.
- * able to complete a background investigation to determine eligibility for a security clearance.

This site lists opportunities for the following programs for High School Students, undergrads, graduate and post-grads

- Cooperative Education Program
- Council of American Ambassadors Fellowship
- Fascell Fellowship Program
- Presidential Management Fellows Program
- Stay-In-School
- Student Internships (Spring, Summer, Fall)
- Summer Clerical Program
- Thomas R. Pickering Undergraduate and Graduate Foreign Affairs Fellowship Programs

- Workforce Recruitment Program

Click here <http://careers.state.gov/students/programs.html#SCP> for more information, and to start the online application process.

3. PhD IGERT Fellowships in Watershed Science and Policy at Southern Illinois University Carbondale

Application deadline is Jan. 15, 2010.

Southern Illinois University Carbondale (SIUC) is offering PhD fellowships under NSF's Integrative Graduate Education Research and Training (IGERT) program. Fellowships are available to U.S. citizens and permanent residents in any water-, river- or watershed-related field of study, including Geology, Hydrology, Geography, Engineering, Plant Biology, Zoology, Ecology, and other areas. Applicants should have a MS-level degree at the time of enrollment (direct PhD possible in cases of exceptional merit) and should have grades, test scores, and research records commensurate with one of NSF's most coveted fellowship awards. Fellowship benefits include \$30,000/year stipends, \$10,500/year education allowances, student laptops, annual international river basin tours, and support for research, conference travel, etc. For more information, please see <http://www.igert.siu.edu> or contact igert@siu.edu.

4. Global Change Education Program

The U.S. Department of Energy Office of Biological and Environmental Research (BER) invites applicants for its Global Change Education Program (GCEP) which promotes undergraduate and graduate education and training supportive of the Department's global change research activities. GCEP has two components: the Summer Undergraduate Research Experience (SURE) and the Graduate Research Environmental Fellowships (GREF). SURE's primary goal is to involve undergraduate students at the end of their sophomore or junior year in BER-supported global change research, then continue this experience during subsequent undergraduate summers. GREF's primary goal is to support research designed and conducted collaboratively between graduate students, faculty advisors and DOE researchers at national laboratories or universities. GREF graduates are encouraged to continue climate change careers in postdoctoral and permanent positions in academia, government laboratories, and industry. Applications are due December 31, 2009. <http://www.atmos.anl.gov/GCEP/>

5. Sustainability Manager, Portland CC

Portland Community College (OR) invites applicants for the position of sustainability manager. The sustainability manager will work to align the College with the goals of the American College & University President's Climate Commitment, the vision of the Climate Leadership Energy Taskforce, and sustainability initiatives. The manager will also facilitate partnerships with all campus sustainability coordinator(s) and other campus specific sustainability initiatives in a manner that allows for creativity while maintaining district-wide consistency. Qualifications include a Bachelor's degree in engineering, environmental engineering, environmental studies, or a related sustainability or environmental degree program. The job closes December 11, 2009.

<https://jobs.pcc.edu/applicants/jsp/shared/frameset/frameset.jsp?time=1259944732234>

6. Assist Dir, Grad Prgm on the Env, The Evergreen State College

The Evergreen State College (WA) is seeking applicants for the position of assistant director of the Graduate Program on the Environment. The position is responsible for providing student services to prospective students and current students in the graduate program on the environment and to alumni of the program. S/he will also be responsible for administrative support including student recruitment, marketing, and community outreach. The key focus of the position's work is to support outreach efforts to prospective students and to provide direct student-service assistance to existing students. The position is open until filled.

<http://www.higheredjobs.com/search/details.cfm?JobCode=175403909>

7. Environmental Education Assistant, Eastern Kentucky U

Eastern Kentucky University is accepting applicants for the position of environmental education assistant. The assistant, in collaboration with the director of the Center for Environmental Education, will plan and implement environmental education experiences for a variety of audiences including in-service and pre-service teachers, university students and faculty, and K-12 students. The incumbent also assists with outreach projects, research, and grant writing. A bachelor's degree in education, environmental science, biology, geography, chemistry, or

related area is required. Applications are due December 9, 2009.

<http://www.higheredjobs.com/search/details.cfm?JobCode=175404921>

8. Professor of Renewable Energy, Florida Gulf Coast U

Florida Gulf Coast University seeks applicants for the Back chair in renewable energy. The professor position will be a part of the interdisciplinary collaboration across the sciences and engineering programs. Emphasis will be placed on integrating fundamental and applied research, developing cross-disciplinary projects to support current faculty research strengths, and providing excellence in instruction in selected courses at the undergraduate/graduate levels related to the candidate's discipline. The successful candidate will be a leader in the development of a university-wide Institute for Renewable Energy and the Environment. The chair-holder is expected to significantly increase the level of research dollars from external sources.

<http://www.higheredjobs.com/search/details.cfm?JobCode=175404272>

9. Sustainability Fellow, Yale University

Yale University's (CT) Office of Sustainability is accepting applicants for the position of sustainability fellow for the spring of 2010. The sustainability fellow position is designed to provide hands-on experience for a recent college graduate with an interest in campus sustainability. The position will be based in the Office of Sustainability and will support the initiatives of various campus departments working on collaborative projects. The fellow's two main responsibilities will be overseeing the logistics and outreach for the annual Sustainability Summit and the logistics for the annual Spring Salvage. The position is open until December 18, 2009.

<http://www.yale.edu/sustainability/documents/YaleSustainabilityFellow2010.pdf>

NEW RESOURCES

1. Report on Growing the Green Economy through Green Chemistry and Design

The Green Chemistry and Commerce Council, National Pollution Prevention Roundtable, and the Lowell Center for Sustainable Production at the University of Massachusetts at Lowell have released a report as a resource to assist states and higher education institutions in developing a green chemistry (GC) and design for environment (DfE) framework. "Growing the Green Economy through Green Chemistry and Design for Environment" defines a vision and an approach to use creative green chemistry and design for environment policy approaches as key economic tools. The report notes the roles of educational institutions in furthering GC and DfE as: educating the future workforce of the green economy; discovering new green chemistry and product options; supporting efforts to overcome application challenges; analyzing policy options; and serving as the host for needed dialogues between researchers and businesses and communities. The new publication also provides a GC and DfE information toolbox.

<http://www.p2.org/wp-content/uploads/growing-the-green-economy.pdf>

See also: Report Press Release <http://www.prlog.org/10417032-state-academics-industry-to-collaborate-promote-safer-products-new-report-outlines-framework.html>

2. Green Classroom Website

Intellidemia has launched a new campaign, "Green Classroom," to target the reduction of resource waste and the introduction of computer-based learning platforms in the classroom. The initiative seeks to raise awareness surrounding course delivery and identify paper waste in the classroom through a new section on the company's website. In the areas of handouts, textbooks, syllabi, assignments, and examinations, the website explores technology platforms and tools to help instructors teach and students learn while protecting the environment.

<http://www.intellidemia.com/company/green.php>

See also: Intellidemia Press Release http://www.intellidemia.com/company/green_classroom_111809.php

3. AASHE announces Campus Sustainability Discussion Forums

Our Discussion Forums offer a central place for finding answers to your campus sustainability questions in a timely manner (within 48 hours) by AASHE staff or other participants, and sharing ideas and best practices. Created in response to member demand, the forums cover 17 topics: co-curricular education, curriculum, research, buildings, climate, dining services, energy, grounds, purchasing, transportation, water, waste, coordination and planning,

diversity and affordability, human resources, investment, and public engagement. These topics mirror the sub-categories in AASHE's new Sustainability Tracking, Assessment & Rating System (STARS).

I encourage you to contribute to the Forums - either by posting questions or responding to existing posts. All posts are publicly available and accessible through an internet search. For these and other reasons, the forums provide an excellent archive for conducting research and finding information quickly. Discussions are well organized for browsing by subject. You can subscribe to any or all of the forums.

If you have never participated in a discussion forum before, now is your chance to find out how easy and useful it is. Here are detailed instructions for using and subscribing to the forums. If you need help with your AASHE login please visit our help page or email Seann Sweeney, Resource Center Manager, at seann.sweeney@ashe.org. Visit www.ashe.org/forums and join the conversation!

EVENTS & CONFERENCES

1. Greening Human Capital May 27th to 28th , 2010 Karlsruhe, Germany

This two-day International Conference on Developing Human Capital for Sustainable Economies event will bring together educationists, policy makers, senior executives of public and private organisations, human capital practitioners, economists, members of international development agencies and other relevant stakeholders to discuss key emerging issues including: global warming and the emergence of the green economies; how is the transformation from high to low carbon economies impacting human capital management; and effective initiatives needed to develop and manage human capital for sustainable economies.

For further information, please see the event details <http://www.etechgermany.com/HCConference.pdf>