SFI weekly newsletter for the week of February 1, 2010
A weekly service of SFI

Please send announcements of your publications, presentations, awards, events, and names of awarded proposals to melissad@mtu.edu.

SFI NEWS

1. **Forestry Department's Robert Froese Presents In Traverse City on Woody Biomass Resources**
   A forester told a room full of people last Thursday night that Michigan does have a significant supply of biomass materials-waste wood material from lumbering and wood processing - that could be burned to produce energy in a responsible way.

Dr. Robert Froese (right) of Michigan Technological University spoke at a public meeting in Traverse City Thursday about burning waste wood from Michigan forests to generate electricity for the city's utility.

Dr. Robert Froese, a forestry professor at Michigan Technological University in Houghton, offered his remarks at a public meeting at Traverse City Light & Power's main offices on Hastings Street. The utility is holding community meetings to discuss the various way it can reach its goal of providing 30 percent of its electricit from renewable sources by 2020. The company is currentl considering large-scale wind turbines, landfill gas, and biomass to reach its goal. More from Michigan Land Use Institute.

2. **Granholm Announces Nearly $6 Million for Green Jobs Training**
   Governor Jennifer M. Granholm Wednesday announced that the state of Michigan has been awarded a $5,819,999 federal grant to train more than 1,000 Michigan citizens and place them into jobs. The Department of Energy, Labor and Economic Growth in partnership with the State of Michigan Council for Labor and Economic Growth was awarded a State Energy Sector Partnership and Training grant by the U.S. Department of Labor through the American Recovery and Reinvestment Act of 2009. More.

SUSTAINABILITY NEWS

1. **CONVOY OF HOPE: 1.6 Million Meals Distributed in Haiti**
   CONVOY OF HOPE® **Donations Page**
   In the two weeks since a 7.0 magnitude earthquake struck Haiti, Convoy of Hope has distributed 1.6 million meals to hungry people in Haiti. **(more)**

SEMINARS

GREAT LAKES RESTORATION INITIATIVE
Accountability - Action - Urgency

1. **Great Lakes Restoration Initiative request for proposals public webinar archive is available for viewing.**
   http://greatlakesrestoration.us/action/?p=178
   This public webinar occurred December 16, 2009 with 584 participants.
   View the captioned video or download video here:
   http://epa.gov/glnpo/live/rfp01webinar/index.html
   Find out more about the Great Lakes Restoration Initiative request for proposals here: http://epa.gov/glnpo/fund/2010rfp01/index.html

2. **Welcome to STARS** - a transparent, self-reporting framework for colleges and universities to gauge relative progress toward sustainability. STARS was developed by AASHE with broad participation from the higher education community. (STARS website)

STARS®
SUSTAINABILITY TRACKING ASSESSMENT & RATING SYSTEM

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. Energy for Sustainability
Sponsor: NSF
Amount: $100,000
Deadline: February 1 to March 3, 2010.
Link to Program Guidelines
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. Most world energy needs are currently met through the combustion of fossil fuels. With projected increases in global energy needs, more sustainable methods for energy production will need to be developed, and production of greenhouse gases will need to be reduced. Sources of sustainable energy include sunlight, wind/wave, biomass, and geothermal.
Hydrocarbons, alcohols, and hydrogen are potential energy carriers that can be derived from renewable sources. Research that generates enabling science and technologies for more efficient hydrogen generation and storage is supported by the program. Potential sources of hydrogen include conversion from biomass and from electrolysis, photolysis or thermolysis of water. Biomass is available from agricultural crop residues, forest products, aquatic plants, and municipal wastes. In addition to hydrogen, biomass can be a source of liquid and gaseous hydrocarbons and alcohols.
In the long term, fuel cells have the potential to convert fuels such as hydrogen and alcohols to electricity at high efficiencies and should play an increasing role in energy conversion. 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. Increased efficiency requires a fundamental knowledge of the interaction of wind with the blade structure. Understanding the fluid flow, and optimizing blade design are important aspects in developing more efficient wind generators. 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.

2. **Great Lakes Restoration Initiative Request for Proposals**
Note: SFI will be coordinating several responses to this RFP. Please feel free to contact Richard Donovan, SFI's operations manager regarding how you can participate.
http://epa.gov/greatlakes/fund/2010rfp01/index.html
HUFY2010 Great Lakes Restoration Initiative Interagency Funding Guide U
U.S. EPA, August 24, 2009
Bob Shuchman's write-up of the summer EPA presentations on the GLRI is here:
http://www.mtri.org/GreatLakesRestorationInitiative.html

3. **NSF Environmental Implications of Emerging Technologies**
Deadline Mar 03, 2010
Upper Amount $100,000 for one to three years. Equipment proposals for less will be considered
This program provides support to develop and test the environmental effects of new technologies. Fundamental and basic research is sought to establish and understand outcomes as a result of the implementation of new technologies such as nanotechnology and biotechnology. The program also supports research on the development and refinement of sensors and sensor network technologies that can be used to measure a wide variety of physical, chemical, and biological properties of interest in characterizing, monitoring, and understanding environmental impacts. The program emphasizes engineering principles underlying technology impacts. Innovative production processes, waste reduction, recycling, and industrial ecology technologies are of interest. All of these have implications that would be relevant to this program.
Current areas of support include
- understanding and mitigating how new developments in nanotechnology and biotechnology will interact with the environment;
- nanotechnology environmental, health, and safety implications and applications;
- predictive methodology for the interaction of nanoparticles with the environment and with the human body, including predictive approaches for toxicity;
- fate and transport of natural, engineered, and incidental (by-product) nanoparticles;
- risk assessment and management of the effect of nanomaterials in the environment;
- evaluation of the effect of increased usage of renewable resources on water supply and land use; and
- sensor and sensor network technologies as they relate to the measurement of these environmental implications.
All proposed research should be driven by engineering principles, and presented in an environmental health and safety or environmental sensor context. Proposals should include involvement of at least one engineering student. URL for more info http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501030

4. **Broadening Participation Research Initiation Grants in Engineering (BRIGE) - NSF 10-509**
Sponsor: NSF
Amount: $175,000
Deadline: Feb 25, 2010
The Directorate for Engineering (ENG) at the NSF offers a research initiation grant funding opportunity with the goal of broadening participation to all engineers including members from underrepresented groups and

persons with disabilities in the engineering disciplines. These grants are intended to increase the diversity of researchers in engineering disciplines to initiate research programs early in their careers, including those from underrepresented groups, engineers at minority serving institutions, and persons with disabilities. By providing these funding opportunities, ENG intends to further broaden participation of engineering researchers who share NSF's commitment to diversity in the following ways:
1. Expand the population of role models who will interact with an increasingly diverse student population, the workforce of the future.
2. Increase the number of engineering researchers at minority serving institutions actively and competitively engaged in research as independent investigators, thereby creating new research opportunities for students from underrepresented groups and persons with disabilities.
3. Fund engineering research projects that use innovative ways to attract and retain members of underrepresented groups and persons with disabilities to careers in engineering.
The participating ENG organizations are
- Electrical, Communications and Cyber Systems;
- Division of Chemical, Bioengineering, Environmental, and Transport Systems;
- Civil, Mechanical and Manufacturing Innovation;
- Engineering Education and Centers; and
- Industrial Innovation and Partnerships.
http://fundingopps.cos.com/cgi-bin/getRec?id=110373&_ksTicket=1adbf95f580b280eeaacefbdbabc0f3c&_ksExpires=2010010100:00:00

5. **Fundamental Research Program for Industry/University Cooperative Research Centers (FRP) - NSF 10-507**
Amount $50,000 to $200,000 for ~10 awards No cost sharing required.
Deadline Feb 17, 2010 to Feb 02, 2011
Industry participation extends the scope and horizon of center research projects so as to drive innovation with industrially relevant fundamental research projects. Industry-defined fundamental research projects must demonstrate measurable industry collaboration and involvement that accelerates fundamental research.
The I/UCRCs contribute to the knowledge base of a large number of industrial manufacturing processes that involve a wide range of technological pursuits and are found in areas such as aerospace, electronics, chemicals, recovery of natural resources, the environment, petroleum, biochemicals, materials, food, power generation, and allied activities. To better enable these processes, the I/UCRC fundamental research program supports research that involves the development of fundamental engineering and science principles, process control and optimization strategies, mathematical models, and experimental techniques, with an emphasis on projects that have the potential for innovation and broad application in areas in industry. This fundamental research is leading to applications that include sensors, materials, pharmaceuticals, imaging, visualization, embedded systems, next generation computers, medical devices and instrumentation, alternative energy, ecological engineering, water and waste treatment, and robotics. Should the fundamental research proposals be awarded, there may be opportunities for additional funding for opportunities such as those listed below:
1. GOALI (NSF-09-516) - Graduate and Undergraduate Student Industrial Fellowship
2. Research Experienced for Undergraduates (NSF 09-598) - REU
Bookmark Url http://fundingopps.cos.com/cgi-bin/fo2/getRec?id=115693
URL for more info http://www.nsf.gov/pubs/2010/nsf10507/nsf10507.htm

6. ***ERDC BAA - Construction Materials Made From Recycled Wastes (CERL-11)***
Sponsor: DOD
Amount not listed
Deadline Continuous
The Construction Engineering Research Laboratory announces research opportunities involving construction materials made from recycled wastes. Research is currently being conducted on construction materials made from recycled, post-consumer wastes with a primary focus on products made from recycled plastics. Required research on these polymeric materials includes, but is not limited to, studies concerning the relationship of fabrication techniques to end-product properties, degradation mechanisms in various environmental exposures, long-term mechanical properties and durability in severe and varying environments, creep

behavior at varied temperatures and loads, behavior and design of bolted connections, quality assurance techniques, design criteria for structural applications, and modeling techniques to predict material behavior in different loading situations over the life-cycle of the product.
Bookmark Url http://fundingopps.cos.com/cgi-bin/fo2/getRec?id=41644

7. **Research Excellence Fund Calls for Proposals**
   Deadline: 4 p.m. Thursday, Feb. 25.
   Proposals are being solicited for the FY2010 Research Excellence Fund (REF), an internal award of the Office of the Vice President for Research.
   The announcement, which includes a program description, proposal format, review criteria and process, award procedure and reporting requirements, is available online. A new REF category, Scholarship and Creativity Grants, has been added this year. More information. Incomplete proposals or those received after the deadline will not be accepted for consideration by the review committee for this year and will be returned. Newly funded REF awards will begin on Thursday, July 1.
   Submit your proposal to Laurie Stark, office assistant in Research Integrity and Compliance, located on the third floor of the Lakeshore Center.

JOBS, POST DOCS, INTERNSHIPS, FELLOWSHIPS, SCHOLARSHIPS

1. **Student Internships in Energy Efficiency and Renewable Energy**
   Ongoing
   The United States Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) offers exciting student volunteer internships throughout the year in its Washington, DC headquarters. These volunteer internships provide exciting opportunities for students to learn through direct experience about the field of energy efficiency and renewable energy. In addition, some colleges and universities give academic credit for federal government internships - and an internship with the government could transition into a full-time paid position after graduation. (more)
2. **Energy Manager, Meredith College**
   Meredith College (NC) is seeking applicants for the energy manager position. The manager will monitor the energy use of the campus and assess and analyze the energy performance of each building through energy audits, reviewing the efficiency of electrical and mechanical systems, and developing energy management action plans in cooperation with the Facility Services Department, Sustainability Office, and the campus community. The manager will also seek to achieve energy savings, promote indoor air and environmental quality, and minimize the overall environmental impact of campus buildings and infrastructure. A bachelor's degree in a related technical, scientific or engineering discipline or equivalent is required, as is a minimum of three years experience in energy management, facility mechanical systems design, construction and/or maintenance.
3. **Environmental Program Coordinator, U South Carolina**
   The University of South Carolina is seeking applicants for the position of environmental program coordinator. The position is responsible for advancing and providing overall leadership for Sustainable Living for University Housing. Principal duties include environmental programs and analysis, conducting environmental conservation researches, grant development, promotion of conservation efforts, development of educational materials, and advisement for resident student organizations. The position will develop and implement educational and communication opportunities for audiences both on and off campus, to include student, faculty, staff, and community organizations. The position will also raise awareness of sustainability initiatives and accomplishments, and foster a culture of collaboration and sustainability. A bachelor's degree or a high school diploma with four years of program experience is required. The position is open until filled.
4. **Research Chair, Oil Sands Env Sustainability, Northern Alberta IT**
   The Northern Alberta Institute of Technology is seeking applicants for an applied research chair in oil sands environmental sustainability. The position will provide scientific investigation and leadership in seeking solutions in oil sands operations, production, resource management, and conservation through

the utilization of green chemistry and sustainable process technologies. The successful candidate will bring a strong record of achievement in applied research in the field and will have attained recognition for making a major impact in this field. Experience creating and directing research teams and excellent interpersonal and communication skills are needed to develop the role to its full potential. A doctoral degree in a relevant field or the equivalent in education and experience is required.

5. **Summer Research Fellowships, Sustainable Endowments Institute**
   The Sustainable Endowments Institute is seeking highly motivated and reliable individuals for full-time summer research fellowships. Research Fellows will collaborate on surveying and analyzing sustainability initiatives at hundreds of colleges and universities in the United States and Canada to help produce the College Sustainability Report Card 2011. The fellowship positions will last approximately 12 weeks, starting in June 2010. Applications will be considered on a rolling basis.
6. **Kathryn Fuller Fellowships**
   Advancing Conservation through Science
   World Wildlife Fund – US (WWF-US) is pleased to announce the availability of Kathryn Fuller Fellowships for 2010. For nearly 50 years WWF has committed to delivering science-based conservation results while incorporating the latest research and innovations into our work. As part of its commitment to advancing conservation through science, WWF established Kathryn Fuller Fellowships to support PhD students and postdoctoral researchers working on issues of exceptional importance and relevance to conservation in WWF-US priority places. This year, the Kathryn Fuller Science for Nature Fund will support doctoral and postdoctoral research in the following three areas: (1) ecosystem services; (2) measuring and monitoring carbon stocks in forests; (3) climate change impacts on and adaptation of freshwater resources.
   http://www.worldwildlife.org/science/fellowships/fuller/item1296.html
7. **STARS Technical Development Coordinator, AASHE**
   AASHE seeks a Technical Development Coordinator to contribute to the ongoing development and refinement of the Sustainability Tracking, Assessment & Rating System (STARS). The STARS Technical Development Coordinator's primary responsibility will be to coordinate a team of Technical Advisors across many disciplines to improve the STARS credits and corresponding support materials. Review of applications will begin on January 25, 2010, and will continue until the position is filled.
   http://www.aashe.org/highlights/jobs/stars-technical-coordinator

EVENTS, CONFERENCES, & CFPs

1. **SUSTAINABILITY VIRTUAL SUMMIT – Main Topic "Smart ITC"**
   March 30 – April 1, 2010
   First in a series of virtual events focusing on Information and Communications Technologies that will dramatically contribute to mitigating the effects of climate change. Topics covered will include, ICT (Information and Communications Technologies) for Virtualization and Dematerialization, ICT for Smart ICT. Event will be archived until May 10, 2010. (more)
2. **Measuring the Real Cost of Parking and Alternative Transportation Options :: Webcast**
   Institutions that are growing or are greening their campuses often face significant challenges with respect to parking. Before moving forward with new parking construction, replacing existing parking spaces, or implementing alternative transportation options, institutions must be able to quantify the true costs of parking. Having this data allows you to determine the right mix of transportation options for your campus. (more)
3. **MIT Sustainability Summit 2010**
   April 23, 2010 Cambridge, MA
   Conference Title - Mind the Gap: Communicate and Collaborate for a Sustainable World
   All the technology and great ideas in the world cannot achieve sustainability by themselves. This summit focuses on the communication and collaboration necessary to make sustainability a reality. Attendees will learn and practice innovative methods for creating effective dialogue and working together during complex decision-making situations and multi-stakeholder engagements. The conference welcomes all

attendees interested in sustainability, including but not limited to students, engineers, business leaders, nonprofit leaders, academics, environmental activists, and public servants. (more)

4. **LCA Sustainable Supply Chain USA**
   April 28-29 Merriot Chicago Midway
   Benchmarking experiences on developing models, principles and standards for measuring and addressing environmental and social impacts throughout the entire life cycle and supply chain. (more)
5. **Uptime Institute Symposium 2010**
   May 17-19 NY, NY
   The Uptime Institute Symposium, one of the most influential events on the IT industry and data center operator calendar, is the only event focused entirely on data center efficiency and green enterprise IT. The Symposium attracts stakeholders in enterprise IT, finance, executive management, data center facilities, and corporate real estate to deal with the critical issues surrounding enterprise computing, resource and energy efficiency, availability and productivity. (more)

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