UPCOMING EAPS MEETINGS

SPRING FACULTY MEETING SCHEDULE
Mar. 24th & Apr. 14th, 2015
3:00-4:30 p.m.
HAMP 3201

EAPS DISTINGUISHED SCIENCE ALUMNI AWARD RECEPTION
April 17, 2015

EAPS ANNUAL AWARDS BANQUET
April 20, 2015
Ross-Ade Pavilion
5:30-9:00 p.m.

EAPS ALUMNI ADVISORY BOARD MEETING
April 21, 2015

EAPS PUBLICATIONS

EAPS COLLOQUIA CONT.
Lev Gorenstein
ITap (Purdue University)
"Research Computing at Purdue"
Thursday, March 5, 2015
3:30 PM
HAMP 1252

UNDERGRADUATE AND GRADUATE STUDENT INFORMATION

INDIANA ASSOCIATION OF ENVIRONMENTAL PROFESSIONALS' (INAEP'S) SCHOLARSHIP SOLICITATION 2015/2016
The Indiana Association of Environmental Professional (INAEP) is proud to announce this solicitation for scholarship applications for the 2015/2016 academic year.

The INAEP will be awarding two $2,000 scholarships, one for undergraduate studies and one for graduate studies. This scholarship is intended to promote and support the training of new environmental professionals in the State of Indiana.

Applicants must be:

Currently enrolled at an Indiana college or university as a full-time undergraduate (sophomore or higher level) or about to begin or in the process of earning a graduate degree;
Pursuing a degree in an environmental-related field;
Possess a GPA of 2.9 or higher; and

Plan to reside and work in Indiana following graduation

Scholarship application forms and submittal guidelines are available on the INAEP’s new website (www.inaep.info.).

Applications must be submitted no later than

Friday, March 27, 2015 by 5:00 PM.

Questions may be sent to Christy Darst, INAEP Vice President, at Christy_Darst@efiglocal.com
GREENPLAINS JOB OPPORTUNITIES

Green Plains is a vertically-integrated ethanol producer based in Omaha, Nebraska. They currently have an ethanol production capacity of approximately 1.0 billion gallons per year with our 12 plants located in Atkinson, Nebraska; Bluffton, Indiana; Central City, Nebraska; Fairmont, Minnesota; Fergus Falls, Minnesota; Lakota, Iowa; Obion, Tennessee; Ord, Nebraska; Riga, Michigan; Shenandoah, Iowa; Superior, Iowa; and Wood River, Nebraska. Green Plains was #8 on FORTUNE 100 Fastest Growing Companies list and continues to expand its operations annually and is looking for new employees!

Their Environmental, Health, Safety, & Security (EHSS) Department is seeking recent college graduates in geology, biology, chemistry, environmental, and engineering fields to fill several available positions.

**EHSS Assistant** – this is a management fast-track position in which recent college graduates in science and engineering are mentored by a Senior EHSS Manager to become an EHSS Manager at one of our locations or for future expansion/acquisition opportunities. This position would initially be based out of one of the following four locations: Bluffton, Indiana, Obion, Tennessee, Superior, Iowa, or Shenandoah, Iowa with an expectation of relocation into the Manager position within approximately 2 years. Relocation would be required and should be expected at that time. Recent Assistants have seen advancement opportunities as quickly as 6 months after hire! This is a fast-paced, management driven program for those interested in permitting, training, and safety that would be interested in living in a rural area.

**PSM (Process Safety Management) Coordinator** – this is a 9 month to one year temporary position for recent college graduates in engineering (or possibly science) background that are looking to gain industrial, hands on experience as they enter the work force. This is a project based position at one of our Nebraska or Minnesota ethanol plants working with Piping and Instrumentation Diagrams (PIDs), job shadowing operations and maintenance staff, to complete Standard Operating Procedures, Confined Space Profiles, Electrical Room classifications, etc. Many of our previous PSM Coordinators have transitioned into full time employment with us as EHSS Assistants (end then to Managers) or as Plant Operators. If you have not had a lot of degree related internships during your college career, and are struggling to get in the door due to lack of industrial, practical, hands-on experience, this could be the opportunity for you!

**EHSS/PSM Internship** – this is a 3-4 month, summer break position for college student finishing their Junior year and preparing to enter their Senior year. This temporary position is for students in hard science or engineering schools that are looking to gain industrial, hands on experience prior to graduation. These are project based positions at one of our ethanol plants (MI, IN, TN, MN, IA, NE) working with Piping and Instrumentation Diagrams (PIDs), job shadowing operations and maintenance staff, completing valve verifications, pipe identification and labeling, and other EHSS projects.

Interns may apply by sending resume, letter of interest, and a copy of transcripts to: careers@gpreinc.com

If you are interested in any of these opportunities, please apply today at the career link found at: [http://www.gpreinc.com/](http://www.gpreinc.com/)

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**OTHER NEWS**

**STEM MENTORING WORKSHOPS OFFERED FOR FACULTY, STAFF, AND GRAD STUDENTS**

Jennifer R. Cohen, a biochemist and experienced advocate for diversity and mentoring in STEM disciplines, will lead two workshops March 4th - 5th presented by Mentoring@Purdue, a program in the College of Agriculture. The workshops are open to all disciplines at Purdue.

The events constitute Mentoring@Purdue's third annual Invited Lecture Series. Cohen holds a doctorate in biochemistry from the Johns Hopkins University School of Medicine. In 2013, she began a year as a science and technology fellow in the American Association for the Advancement of Science. In that role, she used data and analysis to improve methods of communication, including mentoring in general and community among minorities, in science disciplines. Her work also seeks to overcome racial and gender stereotyping.

The events and primary intended audience are:

**Graduate Student Workshop:**

"In Search of Building Highly Effective Professional Relationships"

March 4, 2015
2:00p.m.-3:30 p.m.
Stewart Center, Room 218AB

**Faculty & Staff Workshop:**

"Strategies to Continue to Lift as You Climb"

March 5, 2015
10:30-12:00 p.m.
Stewart Center, Room 214AB
IMPORTANT NOTICE ABOUT THIS NEWSLETTER
This newsletter is used as the primary information source for current and upcoming events, announcements, awards, grant opportunities, and other happenings in our department and around campus. Active links to additional information will be provided as needed. Individual email announcements will no longer be sent unless the content is time-sensitive. We will continue to include our publications, presentations and other recent news items as well. Those using paper copies of the newsletter should go to our newsletter archive on the EAPS website at www.purdue.edu/eas/ and Click on News to access active links as needed. Material for inclusion in the newsletter should be submitted to Fallon McQuern (fmcquern@purdue.edu) by 5:00pm on Thursday of each week for inclusion in the Monday issue.

If it is in the newsletter, we assume you know about it and no other reminders are needed. For answers to common technology questions and the latest updates from the EAPS Technology Support staff, please visit http://www.purdue.edu/eas/info_tech/index.php.

Also, as an additional resource for information about departmental events, seminars, etc., see our departmental calendar at http://calendar.science.purdue.edu/eas/seminars.
Understanding the Role of Arctic Aquatic Ecosystems in Global Carbon Cycle

Zeli Tan
PhD Candidate

The transport of terrigenous carbon to aquatic ecosystems could offset the role of terrestrial ecosystems as a net atmospheric carbon sink. In the arctic, the release of organic carbon from thawing permafrost is changing the carbon balance in aquatic ecosystems (the “priming” effect). But the outcome of this change can be complex. When CH₄ and CO₂ emissions from aquatic lakes and rivers are fueled by labile carbon release from thawed permafrost, lake productivity and carbon sedimentation are also stimulated by nutrient release from the degraded organic matter and terrestrial carbon deposition. In this talk, I will firstly review the progress of scientific community in understanding the role of aquatic ecosystems in global carbon cycle and discuss the gap between our current understanding and the observed carbon dynamics. Next, I will present my research on the development and applications of lake and wetland biogeochemical and permafrost landscape evolution models. Our results indicate that arctic lakes can contribute to atmospheric CH₄ budget at a magnitude close to arctic wetlands and Indigirka-Kolyma Lowlands rich in yedoma lakes are CH₄ flux hotspots. Our models predict that CH₄ emissions from arctic lakes could rise substantially in the 21st century, of which the majority could be attributed to the warming of lake sediments and the minor due to the thaw lake expansion. Our study shows that the performance of wetland biogeochemical models relies on the representation of wetland extent (hydrological cycle) and sulfur deposition. Finally, I will present my ongoing work in incorporating the dynamics of POC, DOC and DIC into the lake biogeochemical model and the assimilation of in-situ and satellite data to constrain the simulated CH₄ emissions from arctic wetlands and lakes. I will discuss my future plan on extending this approach to a global scale and drawing a model framework that connects the carbon and water cycles of terrestrial and aquatic ecosystems.
Using Purdue Research Computing Clusters:
How to Get the Most Out of Your RCAC PBS Jobs without
Causing Pain for Yourself, Others, or Hansen

Lev Gorenstein
ITaP Research Computing

Purdue ITaP Research Computing staff will give a presentation on the “do’s”, “don’ts”, and best practices of using Purdue’s Research Computing cluster systems. The presentation will be followed by an informal discussion with ITaP consultants, and a Q&A time to address specific issues or concerns users may have. Any current or prospective community cluster user is encouraged to attend.

Thursday, March 5, 2015
3:30 p.m.
Room 1252, HAMP

Refreshments at 3:00pm
Room 2201/HAMP
Environmental, Health, Safety, and Security Assistant

Summary:
This EHSS entry-level, career development position supports programs concerning ethanol plant EHSS compliance. This position works under immediate supervision of the regional Senior EHSS Manager. Responsibilities include assisting with employee training, using monitoring and test equipment, gathering data, preparing reports, and updating environmental management plans. While the position is largely focused towards environmental compliance, some overlap into safety and health can be expected.

Essential Functions:
- Conduct/coordinate/support Environment, Health, Safety, and Security (EHSS) training in accordance with applicable regulatory requirements.
- Conduct Leak Detection and Repair monitoring, data input and report generation at assigned plants to ensure compliance with applicable Subpart VV and VVa monitoring and reporting requirements.
- Conduct inspections using established checklists to document compliance with environmental or safety requirements.
- Collect environmental samples (soil, air, water, waste, etc) as directed.
- Collect safety compliance information, conduct equipment inspections, and provide employee safety support.
- Promote EHSS awareness at the plant and monitor for EHSS compliance.
- Provide support for the EHSS committees at sites where needed.
- Communicate with the EHSS Manager and follow through with their directions, suggestions and concerns.
- Assist Senior EHSS Manager in developing and implementing policies and procedures to go above and beyond those required by local, state, and federal regulations pertaining to EHSS.
- Provide support for investigations for EHSS related incidents and near misses.
- Follow-up and track corrective actions for incidents in a timely manner.
- Maintain up-to-date records at all times to comply with inspections by state and federal agencies.
- Keep all regulatory related records and reports on file for the required amount of time.
- Willingness to learn the process of an ethanol plant, the associated environmental permits and regulations, and work in a team atmosphere.
- Other tasks as necessary to support the EHSS department

Knowledge, Skills and Abilities:
- Basic knowledge of federal, state, and local regulations dealing with environmental permitting, air and water quality (Title V a plus), hazardous waste, emergency response and mitigation, water use and discharge, storm water, leak detection and repair, spill prevention controls and countermeasures, risk management and facility response plans. Knowledge of process safety management and OSHA general industry standards a plus but not mandatory.
- Detail-oriented; proficiency for accuracy; dependable; positive attitude; team player
- Strong MS Office experience and proficiency with developing and using spreadsheets and/or databases.
- Ability to multi-task and take ownership of assigned projects
- Ability to lead by example
- Good communication skills, both written and verbal
- Ability to travel to at least 2 other facilities on a monthly basis to perform essential functions such as LDAR inspections
- Ability to traverse rough ground, climb or descend stairs and ladders while carrying equipment (weighing up to 25 lbs) and to work at heights or in enclosed spaces
- Work includes both an office and outdoors in all seasons.

Essential Requirements:
- Bachelor degree in science, engineering, or related field required and 0-3 years experience in related field. Transcripts required, 3.0 GPA minimum required.
- Must be willing to relocate as advancement becomes available
- Travel up to 25%

Green Plains Renewable Energy offers competitive pay; a generous benefit package; paid holidays, vacation and sick time; a retirement savings plan; flexible spending accounts; a business casual attire work environment. Interested applicants, please apply online at www.gpreinc.com/careers

All potential employees of Green Plains Renewable Energy, Inc. will be required to successfully pass a pre-employment drug screening and background check prior to employment.

Equal Opportunity Employer

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. Other duties may be assigned.
Green Plains Renewable Energy offers competitive pay; a generous benefit package; paid holidays, vacation and sick time; retirement savings plan; flexible spending accounts; and more. Interested applicants please send resume via email to: careers@gpreinc.com

*All potential employees of Green Plains Renewable Energy, Inc. will be required to successfully pass a pre-employment drug screening and background check prior to employment.*

*Equal Opportunity Employer*

*To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. Other duties may be assigned.*
Green Plains Renewable Energy, Inc., North America’s fourth largest ethanol producer, recently ranked 8th on Fortune’s 100 Fastest Growing Company list has an immediate need for a Temporary PSM Coordinators at our ethanol facilities in Atkinson, Nebraska, Fairmont, Minnesota and Wood River, Nebraska.

Green Plains currently operates a total of twelve ethanol plants. We also market and distribute ethanol for independent third-party ethanol producers, and we operate grain storage facilities and complementary agronomy and petroleum businesses. We are a growth company and we seek to continue our growth by adding grain storage facilities, ethanol plants, fueling terminals and more.

**Summary of Position:**
The PSM Coordinator will ensure company compliance with OSHA Process Safety Management (PSM) and EPA Risk Management Plan (RMP) rules by developing and implementing tools and management systems necessary to improve the basic elements.

**Responsibilities** include but are not limited to the following:
- Gather and centrally organize information pertaining to the elements in support of Green Plains ethanol plants
- Work with each process department to gain insight into the activities, processes, hazards, and risk prevention mechanisms for each task.
- Improve existing company PSM program elements, including, but not limited to:
  - Confined Space Profiles
  - Standard Operating procedures (SOPs)
  - LOTO Profiles
- Implement a point of use library containing all process safety information in accordance with OSHA 1910.119 following EHS&S Director’s guidance
- Organize PHAs and Compliance Audits and track progress on Corrective Actions
- Work to develop databases for safety inspections, self assessments, and incident investigations
- Assist with Safety program administration to include: training, conducting walk-throughs and PSM committee participation

**Skills and Requirements:**
- Ability to climb ladders and stairs with heights exceeding 100 ft
- Ability to work outdoors in various weather conditions
- Ability to wear PPE
- Ability to travel when required for business (about 25%)
- Excellent time management and organization skills
- Solid communication skills both verbal and written to communicate with all levels of organization
- Computer skills, particularly Microsoft Word and Excel
- Previous background in safety, health, engineering or industrial emergency response
- Bachelor’s degree in related field preferred (Engineering or Hard Science)
- PSM background/experience or safety experience preferred

This is a temporary, project based position, anticipated to last approximately 9 months. Green Plains offers competitive pay and incentive(s).

Interested applicants, please send resume with salary expectations via email to: careers@gpreinc.com or by mail to:
Green Plains Renewable Energy, Inc.
Attn: Human Resources
450 Regency Pkwy, Suite 400
Omaha, NE 68114

Online at www.gpreinc.com/careers

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