LRIGS Hosts Workshop for Practicing Land Reclamation Professionals and Stakeholders

On Wednesday, March 6, 2013, government, industry, consulting and first nations representatives gathered on campus for a day long discussion and idea generating session. The topic of mutual interest on this occasion was land reclamation. They were invited to meet with Dr Naeth and the other faculty and staff involved in the Land Reclamation International Graduate School (LRIGS).

Several questions, listed below, were used as conversation focal points.
- How can LRIGS best assist you in addressing the key challenges you face in land reclamation? In what areas should LRIGS graduate students and post doctoral fellows focus their research? Suggestions for both general topic areas and specific research projects will be welcome.
- What skills should LRIGS graduates have to be successful in positions with industry or government?
- How can LRIGS staff and students interact and work with industry and government?
- What kind of assistance and support can your organization provide to LRIGS?

The answers to these questions will be used to set future directions and program initiatives for LRIGS. Summaries of the notes taken at the workshop were shared with all invitees.

A common theme in the messages received was the need for land reclamation students to specialize in their studies and yet have an appreciation for, and exposure to, the many different facets of land reclamation. Many
participants strongly supported the LRIGS focus on professional skills development and its attempt to develop professionals prepared to move into land reclamation leadership roles in industry, government or academia. The international focus of the school was appreciated with the recognition that this could lead to out of the box thinking which in turn could lead to novel solutions to land reclamation problems.

The workshop was a wonderful opportunity for our students and fellows, all who volunteered their time as note takers. It was enlightening for them to listen to, and participate in, frank discussions about the current state of land reclamation and the joys and tribulations associated with land reclamation work. Our program participants really appreciated the invaluable opportunity to network.

LRIGS is a rigorous, graduate program that is embedded in the reality of practice. We work closely with, and rely heavily on, our partners outside academia. This is their school as much as it is ours. We encourage and invite all land reclamation stakeholders to contribute to LRIGS in any of the ways listed below.

- Applying to serve on LRIGS governance committees and supervisory committees for student research.
- Sharing their knowledge and work experience through workshops, lectures and short courses for program participants.
- Mentoring students.
- Attending LRIGS events and interacting with program participants.
- Providing financial support for program participants through funding tuition, research and travel costs.
- Providing access to disturbed lands on which to conduct research and to equipment and technologies used in reclamation work.

Please contact Dr M Anne Naeth (anne.naeth@ualberta.ca) or Mr Michal Guzowski (michal.guzowski@ualberta.ca), or visit our website at http://www.ualberta.ca/~lrigs/ for more information about LRIGS or to find out how you can participate in or contribute to the program.

Profile: Zhichao Jiao

Zhichao Jiao was one of the first graduate students to join LRIGS in 2012. After corresponding with Dr Naeth and considering the University of Alberta’s excellent reputation in land reclamation, Zhichao moved to Edmonton from China and started his MSc. He views his program as a precious opportunity to enhance his knowledge and abilities.

Zhichao enjoys the dynamic and multidisciplinary approach to research through LRIGS, employing a passion for solving global environmental challenges. His research focuses on microsites and soil properties that affect germination, emergence and establishment of native plant species. He has research sites at Elk Island National Park, Devonian Botanic Garden and Mattheis Ranch near Duchess, Alberta.

Zhichao expresses his views of LRIGS and science eloquently. “LRIGS is like Alexandria in the biography of Archimedes; a place where I can do science as a way to express my mood like Carlos Kleiber directing a piece of music. Land reclamation is solving big human problems. Days and nights can be spent on one single question, drifting like a piece of music. Eureka is the final note!”

Zhichao Jiao, Germany exchange September 2012
LRIGS and BGC Engineering Host Landform Design Course for LRIGS Students and Practicing Professionals

Students and post doctoral fellows in the Land Reclamation International Graduate School along with practicing land reclamation professionals in the areas of consulting, industry and government and other graduate students at the University of Alberta were treated to an engaging course in landform design instructed by Dr Gord McKenna and Ms Jordana Fair from BGC Engineering Inc (http://www.bgcengineering.com/), an LRIGS partner.

The topics covered by this day long course included the eleven steps of landform design, mine closure planning and landform design by “ology”, which involved an overview of the geotechnical, ground water, surface water, soil, vegetation and wildlife dimensions of landform design.

A common theme from student feedback centered around the varied set of anecdotes and examples from which Dr McKenna and Ms Fair were able to draw to enrich the learning experience of the class.

LRIGS is very grateful for the donation of time and resources invested by BGC Engineering to provide this course.

A 2014 course offering, also open to practicing professionals, will likely be focused on wetlands reclamation, a topic of much current interest in the land reclamation community. Be sure to check the LRIGS news and events page at http://www.ualberta.ca/~lrigs/news_events.html for notice of LRIGS short course offerings.

Devonian Botanic Gardens Provides Local Site for Oil Sands Research

HAI Land Reclamation theme members with several LRIGS supervisors have been awarded funds to set up an integrated field site using oil sands material hauled from Fort McMurray. The inspiration for the idea came from the Chicken Creek artificial catchment, a heavily instrumented, anthropogenic watershed research area in Lusatia, Germany.

The site at the Devonian Botanic Gardens will have treatments of interest to industry, government and academia. Early soil development, vegetation, microorganisms, rooting and hydrology will be closely studied. By constructing the site within 30 minutes of University of Alberta main campus, the prohibitive costs of travel to Fort McMurray can be reduced or avoided. HAI Land Reclamation theme sees this opportunity as a long term expandable experiment.
The 2013 HAI Annual Meeting was held in Karlsruhe, a border city between Germany and France, and the home of HAI partner institution, the Karlsruhe Institute of Technology (KIT). Several Canadian HAI Reclamation researchers traveled to Germany to take part in the meetings and for valuable face to face time with their research counterparts.

Our reclamation team was able to meet for one full day before the main event, where they talked about upcoming, large scale research projects like the Devonian Botanic Garden site and how the individual research projects fit together as a full spectrum of ecosystem genesis, from the identity of the microorganisms deep in the soil to the towering canopy of trees above and everything in between.

As HAI has passed the midpoint of the original five year agreement, the main meeting focussed on the future of the international partnership and took time to acknowledge the significant accomplishments not only in global energy solutions but in the successful international collaboration. The meeting day concluded with an enjoyable evening meal on the Rhine River aboard the MS Karlsruhe. Members of HAI will meet again this September for the Science Forum in Edmonton.
News and Events

After more than 3 decades with the University of Alberta, Dr David Chanasyk retired this past winter. Dr Chanasyk mentored 50 graduate students and authored or co-authored numerous manuscripts on soil, hydrology and agriculture research. A celebration honouring Dr Chanasyk’s remarkable career was held February 7th. Dr Chanasyk will continue his work half time for two years and remains involved in various professional activities, including work with the Alberta Institute of Agrologists (AIA). Congratulations!

The second event of the LRIGS lecture series was held on April 3 featuring Dr Eric Higgs from the University of Victoria. Dr Higgs’ talk on “Reclamation, Restoration and the Emergence of Novel Ecosystems” generated a lively discussion. The next lecture will be held November 2013. Stayed tuned to http://www.ualberta.ca/~lrigs/index.html for details.

Alison Murata, PhD student with Dr Naeth, has been elected as the student representative on the Canadian Society of Soil Science national council.

Holly Stover, supervised by Dr Naeth, defended her MSc thesis this past April with a perfect defence. Her thesis is titled, “Non-Native Plant Management and Restoration of Foothills Fescue Grassland in Waterton Lakes National Park, Alberta”. Holly is now working at the Royal Botanic Gardens in Burlington, Ontario. Well done Holly!

HAI/LRIGS student, Victoria Collins, successfully defended her MSc thesis this June. She will continue her PhD studies with Dr Tariq Siddique. Congratulations Victoria!

Dr Naeth was interviewed by German public broadcasting company ARD this past June about her body of work and research in reclamation. The interview will air late this July, stay tuned.

Marteya Yao, student of Dr Naeth, just earned her PhD studying the effects of potassium silicate drilling fluid on soil and vegetation. Marteya will continue at the University of Alberta as a post doctoral fellow with Dr Naeth. Congratulations Dr Yao!
Publications


For more information on the Helmholtz-Alberta Initiative please visit: http://www.helmholtzalberta.ca/

For more information on Land Reclamation International Graduate School at the University of Alberta please visit: http://www.ualberta.ca/~lrigs/