

News from the Dean

We are coming to the end of another successful year in terms of research activity in our faculty. This issue of iMPACT highlights some of our international and Canadian acclaim, and funding awarded to our faculty members. With this last issue of 2010, I would like to add my sincere congratulations to all FEAS faculty, students and staff for their contributions to Ryerson University's research excellence. I look forward to supporting the collaborations and partnerships which will define our ongoing activities for 2011.

Best wishes for the New Year.



Dr. Mohamed Lachemi, P.Eng.
Dean, FEAS

Centre for Urban Energy

On September 1, 2010, Ryerson University announced the creation of the Centre for Urban Energy (CUE). This unique research and technology centre is devoted to the discovery and commercialization of innovative and practical solutions to urban energy issues. It is the first faculty-based research centre in the FEAS.

CUE brings together industries, government, and top researchers from across Canada and around the world to foster and partake in the collaborative and multi-disciplinary study of urban energy. Combining engineering, science, environment, business, and infrastructure management, CUE tackles a wide variety of urban energy challenges from multiple perspectives. The goal of CUE is to help develop solutions to urban energy challenges at home and abroad.

Dr. Bala Venkatesh has been appointed Academic Director of CUE. An advisory board consisting of leaders working in the energy and business sectors is currently being established and will include representation from the three

founding sponsors, Hydro One Networks Inc. (HONI), Toronto Hydro Electric System Ltd. (THESL), and the Ontario Power Authority (OPA).

CUE will receive up to \$7 million in funding over the next five years. The bulk of this funding will come from its founding sponsors; HONI and THESL have each committed \$2.5 million, while OPA will provide up to \$2 million. CUE will administer up to \$900,000 annually for approved research projects, and up to \$100,000 each year for student research awards.

Recently, CUE has received an ISTP Grant for \$43,000 and an OCE Flywheel Project grant for \$24,300.

Construction of the CUE facility at 159 Dalhousie Street has commenced. Partial completion is on track for December 2010, with full completion set for February 2011.

CUE Student Research Awards Program

CUE recently announced its Student Research Awards Program, to support graduate and undergraduate student research projects. Approximately 20 research awards of up to \$5,000 are available. Funding will be awarded in the form of a stipend.

Eligible projects must be completed within one academic term between January 2011 and August 2011, and be supervised by a Ryerson University faculty member.

The deadline for applications is 4 p.m. on November 26, 2010.

The application form and guidelines are available at: <http://www.cue.ryerson.ca/cue/award.html>. For more information, please contact Dr. Venkatesh, Academic Director, CUE (director@cue.ryerson.ca).

Student Success

Department of Chemistry and Biology student Tayseer Mahdi has won one of two 2010 Alfred Bader Scholarships for her fourth-year undergraduate thesis, completed under the supervision of Dr. Gossage.

Department of Chemical Engineering students Nancy Afonso, Ruston Bedasie, Kirill Cheiko, and Andrew Iammatteo placed second in the Student Plant Design Competition at the Water Environment Federation Technical Conference (WEFTEC) in New Orleans for their work carried out under the supervision of Dr. Alvarez-Cuenca.

PhD candidate Jingya Dai won the 2010 Electrical and Computer Engineering Best PhD Thesis Award for her dissertation entitled, "Current Source Converters for Mega-watt Wind Energy Conversion Systems". Jingya was co-supervised by Drs. Wu and Xu. Jingya has also been nominated by the department for the Governor-General Gold Medal.

Nima Soltani won the Department of Electrical and Computer Engineering Best MASc Thesis Award for her dissertation entitled, "Radio-Frequency Power Harvest and Remote Calibration of Passive Wireless Microsystems". Nima was supervised by Dr. Yuan.

Medical physics co-op student Shermiyah Baguisa, who is completing her placement at the Los Alamos National Laboratory (LANL) in New Mexico, has received the 2010 LANL Distinguished Student Performance Award.

Recent MASc graduate from the Department of Chemical Engineering, Hadeel Al Neddaff and her supervisors, Drs. Turcotte and Dahman, won second place and \$300 for their poster presentation, "Production of Biobutanol Biofuel", at the 60th Canadian Chemical Engineering Conference held in Saskatoon this past October.

Department of Electrical and Computer Engineering students Mark Makary, Evgeny Sheinfeld, Dwain Lobo-Pires and their supervisor Dr. Fernando won the Bronze Prize in an international design competition organized by the IEEE Microwave Theory and Techniques Society.

The organizing committee of the 2010 Canadian Undergraduate Physics Conference (CUPC) awarded medical physics student Firas Almasri third place for best presentation in the medical/biological physics category. Firas presented a paper entitled, "Ultrasound and Microbubble potentiated enhancement of chemotherapy", and worked under the supervision of Dr. Karshafian.

Ryerson University team members Alexis-Navidad Mabini, Daniel Hayek, David Dworaczek, Jacob Olszyna, Jason Panday, John Dillon, Michael Goriup, and Kenneth Lee topped the Best Cost Modelling category at the Institution of Mechanical Engineers' Formula Student Competition in

the United Kingdom. Dr. Oguamanam was their faculty advisor.

Department of Mechanical and Industrial Engineering graduate students Anthony Lombardi and Francesco D'Elia placed in the top five at the AUTO21 student poster competition. The students competed against 350 graduate students from across Canada who submitted a research poster on fuel efficiency, fuel consumption and the elimination of GHG emissions.

Architectural science students won first-round merit prizes from the Canadian Wood Council Woodworks Competition. Each group entry received \$2,000. The winning projects were: Modular Wood system by Ksenia Eic, Jordan Lefler, and Nadia Qadir; The Accordion VII by Susan Benjamin, Sunmi Choi, Jeff Lei, Galen Ou, Marcus Song, and Jonathan To; Versatile Backyard Console by M. Nguyen, M. Rahman, L. Reinhard, and A. Shahi; Morphaspot by Rachele Gravel, Gianfranco Lategana Mendez, and Joselin Molina. Professor Hitesh Doshi was responsible for Ryerson University's participation and Professors Straka and Atkinson were faculty advisors.

Department of Electrical and Computer Engineering PhD candidate Thomas Behan was successful in his application to the MITACS Accelerate PhD Fellowship Program. He has been awarded a one-year grant of \$40,000 for his project entitled, "Vehicle Class Identification Via Footprint Pressure", under the supervision of Dr. Zhao.

PhD candidate Venkata Yaramasu and MASc candidate Xiaotian Tan won first prize in the Natural Sciences and Engineering Research Council (NSERC) of Canada Wind Energy Strategic Network (WESNet) student poster competition held in Montreal this past November. The students were supervised by Dr. Wu. The poster presentation was entitled, "State-of-the-Art Power Converter Topologies for Wind Energy Conversion Systems".

Staff News

Goodbye and Hello

After spending several months working with us in the Research and Innovation Office, Susan Haggis has returned to her position in the Office of Research Services (ORS). Despite her return to ORS, Susan's knowledge and expertise in grants administration will continue to be an asset to the FEAS community. We wish Susan all the best in her future endeavours.

Since the beginning of November, John-Patrick Udo has been working in the Research and Innovation Office. We welcome him to FEAS.

Staff Awards

Congratulations to Martha Lee, the recipient of the FEAS Service Recognition Award for September 2010.

The Committee was delighted to receive a nomination for such a dedicated person as Martha. Her nominator, Gabbie Galbraith of the Department of Architectural Science, praised Martha's commitment to providing one-on-one tutorials and timely first-rate service.

Faculty News

Awards

Congratulations to Dr. Beheshti for winning the 2010 Dean's Teaching Award and to Dr. Zywno on being awarded the 2010 Chancellor's Award of Distinction in Teaching.

Signal Analysis Research (SAR) group researchers Yashodhan Athavale and Dr. Krishnan, in collaboration with Ted Rogers School of Business Management researchers Lyubomir Halachev and Dr. Guergachi, were awarded the Best Paper Award in the International Congress on Environmental Modelling and Software for their research paper entitled, "Analysis of the Economic Sustainability of Companies in the Water Sector".

Drs. V. Mistic and J. Mistic were awarded best paper at IWCMC 2010, a symposium on WPANS and WLANs in Caen, France, for their paper entitled, "Performance of G-Limited Scheduling in a Cognitive MAC with Transmission Tax".

Dr. Easa has received the 2010 Award of Academic Merit from the Transportation Association of Canada (TAC). The award was presented at TAC's 2010 Annual Conference and Exhibition.

Appointments

Dr. Venetsanopoulos has been elected Fellow of the Royal Society of Canada in the Academy of Sciences.

Dr. Bonato, Chair of Mathematics, is the new Co-editor-in-chief of *Internet Mathematics*, an internationally respected journal on complex real world networks.

Dr. Jaber has been elected to the Executive Board of the International Society for Inventory Research. He has also been appointed Senior Editor of the *Ain Shams Engineering Journal* (Elsevier) for a second term.

Research Grants

Congratulations to NSERC ENGAGE grant winners: Dr. Joon Chung from Aerospace Engineering; Dr. Songnian Li from Civil Engineering; Drs. Jelena Mistic and Alexander Ferworn from Computer Science; Drs. Anastasios

Venetsanopoulos, Andy Ye, Dimitri Androutsos, Xiao-Ping Zhang and Sri Krishnan from Electrical and Computer Engineering; Dr. Michael Kolios from Physics; and Drs. Siyuan He and Cory Searcy from Mechanical and Industrial Engineering.

Congratulations to NSERC strategic grant winners Dr. Yang and Dr. Gu from Electrical and Computer Engineering.

Principal investigator Dr. Ein-Mazaffari and Co-investigator Dr. Upreti of Chemical Engineering have secured an NSERC-CRD grant of \$146,000 for their project entitled, "Using advanced flow visualization techniques and computational fluid dynamics to optimize the mixing of micron-sized polymeric particles in slurry reactors". Their research will be conducted in collaboration with Xerox Research Centre of Canada.

Principal investigator Dr. Behdinan and Co-investigator Dr. Fawaz of Aerospace Engineering have secured an ISTEP Canada grant in collaboration with McGill and Laval Universities, Pratt and Whitney Canada, NRC, and in partnership with India-based companies Infortech., IOCL, IIT, and HPC.

Research News

Astronaut Bob Thirsk landed on campus to debrief mechanical and industrial engineering professor and researcher Dr. Saghir and his research team on their experiments aboard the International Space Station.

Parsons New School in New York City is hosting *Carrot City: Designing for Urban Agriculture*, an exhibition curated by Mark Gorgolewski, June Komisar, and Joe Nasr from Ryerson University. The exhibition, held from October 1 to December 15, 2010, is a collaboration between Ryerson University and the New School and examines the relationships between design, food systems, and communities through curriculum and research.

First Graduating Class

In the Fall 2010 convocation, the first group of students graduated with double Master's degrees from Ryerson University and Wroclaw University of Technology in Poland. The combined graduate program was established in December 2007.

This Fall, Drs. Abu Khalifeh and Snajabi became the first graduates of the PhD program in Chemical Engineering.

Submissions to iMPACT

We encourage students, staff and faculty to send news items for iMPACT to rio@ryerson.ca. Please use the subject line "iMPACT News Item".