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Future of Alberta ICT sector bright with influx of excellent students

CALGARY – Alberta’s increasing strength in the information and communications technology (ICT) sector is being fed by high-ranking graduate students attracted by top professors, and supported by a scholarship that supports ICT research in Alberta.

iCORE President Dr Brian Unger announced today the award of Graduate Student Fellowships to over 85 students who have chosen to study in ICT at an Alberta university in 2001-2002.

“Students from Newfoundland to British Columbia are coming to study with high-calibre professors in Alberta who have developed stellar reputations in their fields,” Dr Unger said. “Many students say the iCORE awards tipped their decision to come to Alberta, because it made it financially possible to follow their dreams.”

Martin Fuhrer had tempting offers to study at UBC and the University of Toronto. “What brought me to Alberta was the knowledge that my finances were taken care of, I could focus solely on my research and contribute to the University of Calgary’s very reputable computer graphics department. I am really looking forward to the next two years!”

Daniel Lizotte came from the University of New Brunswick to study artificial intelligence and bioinformatics at the University of Alberta. “There is a lot of high quality research in this Computing Science department.” Did the iCORE award play a part in his decision? “Absolutely.”

Barbara Dufours chose to study at the University of Alberta for a primary reason: “I wanted to work with Dr Michael Brett. After that, the iCORE award was an excellent incentive.”

David Morgan came from Newfoundland to study at the University of Alberta, where he found “a solid program with depth.” Did the iCORE award play a role in his decision? “Very much so. I am able to study without the extra pressure of being a Teaching Assistant.”

All recipients have been identified at the national level as promising students and are recipients of a Natural Sciences and Engineering Research Council postgraduate scholarship.

For more information or interviews, contact:
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Background

iCORE Graduate Student Fellowship award recipients' areas of research interest:

Lora Neilson is implementing a software algorithm to locate the source of epileptic activity in a patient's brain using EEG recordings and MR images of his or her head. This is an important area of research because it will eliminate the need for invasive diagnostic procedures such as subdural electrodes, and it will help doctors pinpoint the location of aberrant brain tissue so that they can remove ONLY the necessary part of the brain, rather than a larger region which may result in loss of function. Further, this technology may be applied to other diseases of the brain.

Christopher O'Brian is investigating sensor readings or warning messages from equipment components. An example would be commercial aircraft, or modern mining equipment, that contain sensors throughout their engines and electronic components that give information such as engine temperature, oil pressure, etc. O'Brian will be looking at Artificial Intelligence techniques that allow for the creation of better predictive systems that can warn technicians when components are going to fail. These techniques can increase safety and allow for better planning of future maintenance on systems. Two projects that he has worked on in the past with the National Research Council that involve these type of techniques are: The ADAM Project - Building predictive systems for modern commercial aircraft (in partnership with Air Canada). http://www.iit.nrc.ca/IR_public/ADAM/overview.html) and The IO2 Project - Building maintenance monitoring and predictive systems for the Mining Domain (in partnership with Syncrude).

Anthony Van Tol is looking at artificial intelligence applications in construction engineering and management, important in the evolution of the construction industry from that of a craft-based industry to one with scientifically based principles and processes. Prior to influences from the personal computer, many of the methods and decisions made in the construction industry were based on senior project personnel's experience, which was gained over years and years of exposure to the industry. Now with the advent of the personal computer we are just beginning to develop "smart" programs that can be loaded with information which aids the inexperienced in the decision making process. Not only does this help the inexperienced but the applications also helps the experienced construction personal collect and manage large amounts of data and make informed decisions on exact data rather than generalizations.

Martin Fuhrer is considering a collaborative research project with Stanford University in the rendering of scattered light off vegetative surfaces, such as leaves. In the field of computer animation, current lighting models tend to give leafy surfaces a plastic or metallic appearance, because they only consider light reflected off the surface rather than the reflection and refraction of light within the numerous membranes of the leaf. Advances in this field will considerably increase the realism of computer-generated plant models and directly benefit industries such as computer animation.

Julie Andreotti is working on a simulation of the aurora borealis, or the "Northern Lights". There are still many questions to be answered in terms of how the aurora develop and in understanding what processes are going on to produce some of the observable artifacts. Andreotti is planning to test and hopefully support some of the current theories in area.

Award Recipients

FIRST YEAR AWARDS

Trevor Allen, U of A Electrical and Computer Engineering
Julie Andreotti, U of C Computer Science
David Ballantyne, U of A Mathematical Sciences
Cyril Botteron, U of C Electrical and Computer Engineering
David Chang, U of A Chemical and Materials Engineering
Colin Cherry, U of A Computing Science
Scott Clark, U of C Biological Sciences
Michael Colgan, U of A, Electrical and Computer Engineering
David Cooke, U of A Physics
Don Dansereau, U of C Electrical and Computer Engineering
Carla Davidson, U of C Biological Sciences
Brian Dick, U of C Electrical and Computer Engineering
Barbara Marie Djurfors, U of A Chemical and Materials Engineering
Srdjan Dragic, U of A Electrical and Computer Engineering
Morris Flynn, U of A Mathematical Sciences
Georgia Fotopoulos, U of C Geomatics Engineering
Trevor Fox, U of C Electrical and Computer Engineering
Martin Fuhrer, U of C Computer Science
Bogdan Georgescu, U of C Electrical and Computer Engineering
Christian Giasson, U of A Electrical and Computer Engineering
Kenneth Harris, U of A Electrical and Computer Engineering
Alexander Holden, U of A Electrical and Computer Engineering
Jonathan Holzman, U of A Electrical and Computer Engineering
Sean Hum, U of C Electrical and Computer Engineering
Paul Joss, U of C Mathematics and Statistics
Scott Kennedy, U of A Electrical and Computer Engineering
Cameron Kiddle, U of C Computer Science
Christine Lacasse, U of A Civil and Environmental Engineering
Simon Leonard, U of A Computing Science
Daniel Lizotte, U of A Computing Science
Allan MacDiarmid, U of A Physics
Jeffrey Mahovsky, U of C Computer Science
David Morgan, U of A Computing Science
Lora Neilson, U of A Electrical and Computer Engineering
Daniel Neilson, U of A Computing Science
Christopher O'Brien, U of A Computing Science
Sean Peacock, U of C Biological Sciences
Christopher Pinchak, U of A Computing Science
Tim Poon, U of A Electrical and Computer Engineering
Robert Randall, U of C Electrical and Computer Engineering
Matthew Reid, U of A Electrical and Computer Engineering
Terence Schauenberg, U of A Computing Science
Ajit Paul Singh, U of A Computing Science
Kerry Tomlin, U of C Biological Sciences

Anthony Van Tol, U of A Civil and Environmental Engineering
Ryan Watson, U of C Electrical and Computer Engineering

SECOND YEAR AWARDS

Nicholas Aleksyuk, U of A Computing Science
Jonathan Backer, U of A Computing Science
Kristen Beaty, U of A Physics
Andrej Bona, U of C Mathematics and Statistics
Steven Bromling, U of A Computing Science
Benjamin Chan, U of A Electrical and Computer Engineering
Claudine Couture, U of A Physics
Brad Davis, U of C Electrical and Computer Engineering
Carolina Diaz-Goano, U of A Chemical and Materials Engineering
Kathleen Dohan, U of A Mathematical Sciences
Robert Elliott, U of A Electrical and Computer Engineering
Michael G. Forbes, U of A Chemical and Materials Engineering
Tyler J. Foster, U of A Physics
Janice Friedman, U of C Biological Sciences
Anne Gildenhuis, U of C Mechanical Engineering
Markian Hlynka, U of A Computing Science
Matthew Hopkins, U of C Chemistry
Scott Irvine, U of A Electrical and Computer Engineering
Padam Lal Kafle, U of C Electrical and Computer Engineering
Sandra Lorraine Kennedy, U of C Geomatics Engineering
John C. Koob, U of A Electrical and Computer Engineering
Dion Leung, U of A Electrical and Computer Engineering
Michael William Lynch, U of C Electrical and Computer Engineering
Cameron Macdonell, U of A Computing Science
Glenn MacGougan, U of C Geomatics Engineering
David Matthew MacLeod, U of C Geology and Geophysics
Geoffrey Messier, U of A Electrical and Computer Engineering
Kyle O'Keefe, U of C Geomatics Engineering
Patrick Pantel, U of A Computing Science
Christopher A.C. Parker, U of A Computing Science
Mark Petovello, U of C Geomatics Engineering
Michael James Pycrz, U of A Civil and Environmental Engineering
David Schibli, U of C Biological Sciences
Ryan Schneider, U of C Electrical and Computer Engineering
Jeremy Sit, U of A Electrical and Computer Engineering
Raymond Sung, U of A Electrical and Computer Engineering
Roberto Villanueva, U of C Mechanical and Manufacturing Engineering
Robert Walton, U of A Electrical and Computer Engineering
Michael S. J. Wojcichowsky, U of A Mechanical Engineering