Université d' University of Ottawa

Faculté de génie
Faculty of Engineering

Célébration de l'excellence
Celebration of Excellence

La Faculté de génie vous invite à la présentation en l'honneur des récipiendaires du Prix d'excellence dans l'enseignement John V. Marsh et du Prix d'excellence en recherche G.S. Glinski

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DATE: **Mercredi le 22 novembre 2006**
ENDROIT: **Pavillon Macdonald, pièce 146**
HEURE: **13h00**

The Faculty of Engineering invites you to attend the public lecture in honor of the recipients of the John V. Marsh Award for Excellence in Teaching and G.S. Glinski Award for Excellence in Research

DATE: **Wednesday, November 22, 2006**
LOCATION: **Macdonal Hall, room 146**
TIME: **1:00 p.m.**

"Spreading Strategies for Future Wireless CDMA System"

by
Claude D'Amours
School of Information Technology and Engineering

The demand for wireless access has increased dramatically in recent years. Code division multiple access (CDMA) has been used as the access scheme for 2nd and 3rd generation wireless communication systems. Third generation wireless systems have not sufficiently met the demand in many areas. Researchers are now investigating new methods for 4th generation of wireless services. Service providers are heavily invested in CDMA technology, therefore it would be beneficial to design new systems that are built on top of the existing CDMA infrastructure. In this talk, we look at improving the error rate performance of CDMA systems by using spreading strategies that relay redundant information to the receiver without the need to transmit redundant information, as in error control coding schemes. We then apply the technique to multiple input, multiple output (MIMO) systems that employ CDMA techniques (CDMA/MIMO). The improved error rate can then be traded off against more active users, resulting in higher capacities.

"An Emergency Preparedness and Response Based Distributed Interactive Simulation System: A Necessary Public Safety Testbed."

by
Azzedine Boukerche
School of Information Technology and Engineering

This talk will consist in an overview about the major research projects related to distributed simulation, context aware computing, wireless multimedia and wireless ad hoc and sensor networks which we are currently investigating at PARADISE Research Laboratory, uOttawa. Then, we shall focus upon the design of large-scale distributed simulation systems for critical conditions monitoring class of applications using both location/context aware computing and wireless sensor technologies. Finally, if time permits, we will discuss the DoD High Level Architecture and its application to large-scale distributed interactive and collaborative systems, as well as SWiMNet, a high-performance simulation testbed for large-scale wireless and mobile networks we have developed. This testbed allows very detailed and realistic model specifications. It will facilitate and enable us to evaluate and design new protocols and applications for future generations of mobile ad hoc and sensor network technologies.