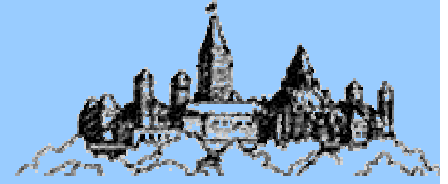




Celebrating 125 Years
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Ottawa Section

IEEE 125th EMBS Seminar Series



Charting a Course of Prediction through Uncharted Waters: Neonatal Health Informatics for our Next Generation

Dr. Carolyn McGregor

Canada Research Chair in Health Informatics, Faculty of Business and IT/Faculty of Health Sciences, University of Ontario Institute of Technology

Today, one out of every 14 Canadian mothers will give birth prematurely (ie 7.1%). These early births, which happen in the seventh and eighth month of pregnancy, are responsible for three quarters of all infant deaths in Canada. Worse still, even when infants survive, premature babies may develop lifelong problems in the crucial days and weeks after birth. Neonatal Intensive Care Units boast state of the art medical devices to monitor and support premature babies, however, Neonatologists are increasingly weighed down by vast quantities of manually charted data and 86% false alarms from medical devices. Recent research is showing that conditions these babies can develop tell the same subtle story through their progression that is not detectable through the human eye until the impact is severe enough for manual detection. Early detection may result in reduced mortality and mobility and shorter recovery time and hospital days. As Canada Research Chair in Health Informatics, Dr. Carolyn McGregor is pioneering new ways to improve outcomes for premature babies. This presentation overviews several collaborative research projects that aim to increase survival rates and quality of life rates for neonates. Key contribution areas include: 1) Real-time processing of complex cross correlation of intensive care physiological signals; 2) new approaches to data mining techniques to unlock the story that unfolds before condition onset; and 3) cloud computing/services computing to support the outsourced service of critical care.

January 19, 2011

admission is free

18:00 – 19:30 pm

ME-3174

Carleton University

Light refreshment will be served



Dr. Carolyn McGregor is the Canada Research Chair in Health Informatics based at the University of Ontario Institute of Technology, Canada. She has led pioneering research in event stream processing, temporal data stream data mining and service oriented architectures. She progresses this research within the context of health and medicine for advanced support for clinical management and research. Dr McGregor is an international leading researcher in the area of critical care health informatics and in particular neonatal health informatics for which she has specialised for over 10 years. She is the Canadian representative for the IEEE Engineering in Medicine and Biology Society (EMBS) and was the inaugural IEEE EMBS representative for IEEE Women in Engineering. In 2008 she was awarded a multi-million dollar IBM First of a Kind Research (FOAK) Award. In 2009 she received the IBM Infosphere Innovation award for her UOIT based team's role in project Artemis.



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