

**IEEE ENGINEERING IN MEDICINE & BIOLOGY AND
SIGNAL PROCESSING CHAPTERS OF KW SECTION IN
ASSOCIATION WITH CPAMI PRESENT**

**Applications of Image Analysis for the
Detection and Treatment of Breast Cancer**



Speaker: Professor Anne Martel, Sunnybrook Health Science Center, University of Toronto

Date: October 19, 2012

Time: 2:30pm – 3:30pm

Place: DC1304- Refreshments will be provided

Abstract :

MRI has been shown to have a greater sensitivity for detecting breast cancer in high risk women and the Ontario Breast Screening program has recently introduced MR mammography as part of its screening program. The main difficulty with MRI is the relatively high recall rate; in this talk I will describe our work in developing methods for Computer Aided Detection and Diagnosis (CAD) that is aimed at reducing this rate. MRI is also extremely valuable in guiding surgery. In lumpectomy procedures the goal is to remove the minimal amount of breast tissue whilst still ensuring clear margins. As our ability to detect and diagnose small tumours improves, the challenge for the surgeon increases as it becomes more difficult to locate the tumour. Supine MR images with contrast enhancement can provide intra-operative guidance and I will describe some of our efforts in developing and validating marker based registration techniques.