

# UW CENTER FOR PATTERN ANALYSIS AND MACHINE INTELLIGENCE

## CPAMI SEMINAR SERIES

### Cooperative Intelligent Systems

**Speaker:** Prof. Mohamed Kamel

**Date:** Nov 2, 2011

**Time:** 4 pm- 5 pm

**Place:** E5 - 5128 Refreshments will be served

#### **Abstract :**

When solving large and complex problems many of the existing monothetic models don't scale up. Research on cooperative, intelligent systems, involves studying, developing and evaluating architectures and methods to solve complex problems using adaptive and cooperative systems. These systems may range from simple software modules (such as a clustering or a classification algorithm) to physical systems (such as autonomous robots, machines or sensors). The main characteristic of these systems is that they are adaptive and cooperative. By adaptive, it is meant that the systems have a learning ability that makes them adjust their behavior or performance to cope with changing situations. The systems are willing to cooperate together to solve complex problems or to achieve common goals. In this talk, I review specific examples of cooperative systems that we have been developing and building at the Center for Pattern Analysis and Machine Intelligence at the University of Waterloo. These include, multiple cooperative robots, Multi-sensor planning, Multiple classifiers and decision combining methods and Multiple clustering and learning methods.