



**Abdel EL-SHAARAWI** is a senior research scientist at the Canadian National Water Research Institute and Professor of Statistics at McMaster University. His work involves developing and teaching environmental statistics with emphasis on water quality and quantity. He is co-founding Editor of *Environmetrics* and founding President of the International Environmetrics Society TIES, a recent Section of the ISI. He served as an expert on water related issues to agencies including WHO, World Bank, the Canadian International Development Agency, EPA and the Governments of Egypt, Morocco and Argentina. He has been a visiting professor at Universities of Metz (France), Genoa (Italy), Kuwait, Sultan Qaboos (Oman), King Saud (Saudi Arabia) and Masaryk University (Czech Republic). He has received many awards including Fellow of ASA, Fellow Royal Statistical Society, Fellow of Modelling and Simulation Society of Australia and New Zealand, Council ISI Member, the Distinguished Achievement Medal of the ASA Section on Statistics and the Environment, the Citation of Excellence Award from the Government of Canada and the 2008 UW Faculty of Mathematics Alumni Medal.

## IC<sup>3</sup> Seminars 2009

Presented by the Interdisciplinary Centre on Climate Change

### Monitoring Toxic Contaminants in Large Ecosystems: PCBs in the Great Lakes

Monitoring large aquatic ecosystem for toxic contaminants is a complex challenging task. A Canadian Monitoring Program for the Great Lakes is used to provide an example for monitoring large ecosystems. One component of this program is monitoring the concentrations of Persistent Toxic Substances (PTS) in biological organisms. We focus on PCBs, a member of PTS, accumulation in the whole tissue of lake trout, the top predator of the food chain. We describe the: a) program elements and its objectives; b) characteristics of the collected data, and c) difficulties associated with data analysis, and in communicating the results to stakeholders. The data sets discussed were collected from Lakes Superior, Huron, Erie and Ontario during the years 1977 to 2005. The response variable represents the PCBs concentration in a single fish composite sample and the explanatory variable includes the age, weight and length of the fish. In each year and lake these measurements were made on a number of lake trout. The outcome of the analysis is to account for the changes in PCB concentration spatially and temporally and to compare the concentration to the fish consumption guidelines.

**December 7, 2009, 12:00 — 1:15 pm**

**Location: EV1 350**

*Seating is limited. Refreshments provided.*

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