## **Educational Innovation in Teaching: The Pedagogy of Clickers and Beyond**

Thursday, September 4, 2008

Math & Computing Building MC 2034 from 9:00am - 11:00am
SPONSORED BY: THE CENTRE FOR TEACHING EXCELLENCE, UW
BOOKSTORE, I>CLICKER, AND ITMS - INSTRUCTIONAL TECHNOLOGIES
AND MULTIMEDIA SERVICES

ONE OF THE MAJOR RECENT REFORMS IN SCIENCE EDUCATION INVOLVES PAUSING IN THE LECTURE TO ASK CONCEPTUAL QUESTIONS DURING CLASS (THINK, PAIR, AND SHARE). THIS ACTIVITY PROVIDES OPPORTUNITIES FOR STUDENTS TO WORK WITH NEW MATERIAL AND FOR FACULTY TO COLLECT IMMEDIATE STUDENT FEEDBACK. BACKED BY EVIDENCE OF TREMENDOUS LEARNING BENEFITS, THIS REFORM HAS SPREAD TO TEACHING MEDIUM-SIZE AND LARGE CLASSES IN ALMOST ALL DISCIPLINES. IN THIS WORKSHOP, YOU WILL LEARN PRODUCTIVE WAYS TO USE CLICKERS FROM THE CO-INVENTOR OF I>CLICKER CLASSROOM RESPONSE SYSTEMS, DR. MATS SELEN--SPECIFICALLY, HOW TO INTEGRATE PEER INSTRUCTION AND FORMATIVE ASSESSMENT INTO THE LECTURE TO INCREASE STUDENT ENGAGEMENT, INTEREST, AND LEARNING.



LEARN FROM MATS SELEN, CO-INVENTOR OF THE <u>ICLICKER</u><sup>TM</sup> HOW TO EFFECTIVELY USE STUDENT RESPONSE SYSTEMS IN YOUR CLASSROOM. YOU'LL BE ABLE TO TEST THE PRODUCT, ASK QUESTIONS AND SHARE IDEAS OF HOW YOU HAVE USED OR ARE PLANNING ON USING STUDENT RESPONSE SYSTEMS.

## PLEASE RSVP WITH PAUL KATES, CENTRE FOR TEACHING EXCELLENCE: <u>PKATES@MATH.UWATERLOO.CA</u>

## BIOGRAPHICAL SKETCH OF DR. MATS SELEN

PROFESSOR OF PHYSICS, MATS SELEN, EARNED A B.S. IN PHYSICS FROM THE UNIVERSITY OF GUELPH (1982), A M.Sc. IN PHYSICS FROM GUELPH (1983), AND AN M.A. IN PHYSICS FROM PRINCETON UNIVERSITY IN 1985. HE RECEIVED HIS Ph.D. IN PHYSICS FROM PRINCETON IN 1989. HE WAS A RESEARCH ASSOCIATE AT THE CORNELL ELECTRON STORAGE RING (CESR) AT CORNELL UNIVERSITY FROM 1989-1993 BEFORE JOINING THE DEPARTMENT OF PHYSICS AT ILLINOIS. PROFESSOR SELEN IS AN EXTRAORDINARY TEACHER, AND HIS DECISION TO ACCEPT A UNIVERSITY POSITION, RATHER THAN TO REMAIN A PERMANENT STAFF RESEARCHER AT A MAJOR PARTICLE PHYSICS FACILITY, WAS MOTIVATED BY HIS COMMITMENT TO SCIENCE EDUCATION. HE HAS BEEN A PRIME MOVER BEHIND THE MASSIVE CURRICULUM REVISION OF THE CALCULUS-BASED INTRODUCTORY PHYSICS COURSES (PHYSICS 211-214), AND HE WAS THE FIRST LECTURER IN THE NEW SEQUENCE. HE DEVELOPED AN UNDERGRADUATE "DISCOVERY" COURSE WHERE FRESHMEN CREATE THEIR OWN PHYSICS DEMONSTRATIONS—DESIGNED FOR GRADE-SCHOOL CHILDREN—TO INTRODUCE THEM TO THE FUN AND EXCITEMENT OF PHYSICS. HE ALSO STARTED THE "PHYSICS VAN," THE DEPARTMENT'S AWARD-WINNING COMMUNITY OUTREACH PROGRAM, AND IS A REGULAR ON LOCAL MORNING TELEVISION AS "THE WHYS GUY." PROFESSOR SELEN HAS ALSO MADE SIGNIFICANT CONTRIBUTIONS TO EXPERIMENTAL PARTICLE PHYSICS THAT HAVE MADE HIM AN INTERNATIONAL LEADER IN THE AREA.