



Ontario Association of Physics Teachers

**Electrical and Computer Engineering
University of Toronto
Conference 2014**



The Edward S. Rogers Sr. Department
of Electrical & Computer Engineering
UNIVERSITY OF TORONTO

Physics: The Roots of STEM Education

Science Technology Engineering Mathematics

May 8 – 10, 2014

Welcome! Please check your registration for confirmation of the sessions you have registered for. The location of each session is indicated in the program.

THURSDAY MAY 8, 2014

Registration and Dinner

6:00 pm – 7:30 pm

Welcome

BA 1170

7:30 pm – 7:40 pm

Activities/Tours

BA 1170

ECE Tours

Demo Derby

Social

O'Grady's

9:00 pm – 11:00 pm



FRIDAY MAY 9, 2014

Welcome

8:45 am – 8:55 am

Keynote - Bonnie Schmidt – Let's Talk Science

BA 1160

8:55 am – 9:45 am

Break

9:45 am – 10:15 am

Two single sessions (A & B) or One Double Session (AB)

10:15 am – 12:00 pm

Lunch

Noon – 1:30 pm

Boxed lunches are provided in Atrium

Session C

1:30 pm – 2:45 pm

Break

2:45 pm – 3:15 pm

Session D

3:15 pm – 4:30 pm

Closing Remarks for the Day

The Great Giveaway

4:30 pm – 5:00 pm

BA 1160

Dinner

You may sign up to one of five restaurants at the Registration Desk

Evening meeting [lace will be announced for additional social time after dinner!]

SATURDAY MAY 10, 2014

Session E

9:00 am – 10:15 am

Break

10:15 am – 10:45 am

Session F

10:45 am – 12:30 pm



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FRIDAY MAY 9, 2014

Friday May 9, 2014 Workshops (Session A & B or Session AB)

Session A 10:15 am - 11:00 am	Session B 11:15 am - 12:00 pm	Double Session AB 10:15 am - 12:00 pm
<p>01 Negative-Refraction, Super-Resolution Imaging and Invisibility with Metamaterials George V. Eleftheriades Electrical and Computer Engineering University of Toronto</p> <p>Room BA 2185</p>	<p>05 Engineering Education – Emerging Trends and Innovations Susan McCahan University of Toronto</p> <p>The Inverted (Flipped) Classroom Lessons Learned from a Second-Year Physics Course Micah Stickel University of Toronto</p> <p>Room BA 2185</p>	<p>09 STEM, STSE and Relevance Mars Bloch</p> <p>Room BA 2165</p>
<p>02 Perimeter Institute: What Good is a STEM Education? Damian Pope</p> <p>Room BA 2145</p>	<p>06 Outreach Opportunities Sara Cormier, Patrick Whippey, DEEP/Engineering</p> <p>Room BA 2145</p>	
<p>03 Girls in Science Shohini Ghose Centre for Women in Science at WLU Dawn Britton University of Toronto Engineering Outreach Chandra Boon Mindset</p> <p>Room BA 2159</p>	<p>07 Universal Tool for Tinkering Hasan Shodiev Sir Wilfrid Laurier University</p> <p>Room BA 2159</p>	<p>10 Engineering Contests and STEM Roberta Tevlin Andrew Moffat</p> <p>Room BA 2175</p>
<p>04 The ability of our students to think scientifically: probably not as great as we think Dr. David Harrison University of Toronto Department of Physics</p> <p>Room BA 2155</p>	<p>08 Applying Physics Principles to Build a Career Roadmap Carolyn Burgess Ian Burgess</p> <p>Room BA 2155</p>	

Friday May 9, 2014 Workshop Session C

1:30 pm – 2:45 pm

Number	Title	Presenter(s)	Location
11	Sustainable Energy Systems University of Toronto	Nazir Kherani Advanced Photovoltaics and Devices Research Group Olivier Trescases High-Efficiency Power Management Zeb Tate Smart Grid Design Micah Stickel	BA 2185
13	New Pedagogies for Teaching Physics	John Caranci	BA 2145
14	From Black Currant to Green Current: A New Old Way to Catch Sunrays	Franco Gaspari UOIT	BA 2155
15	STEM Problem Solving	Chris Meyer	BA 2165
16	Studying the Climate - Resources for High School	Aubyn O'Grady CANDAC - University of Toronto Shawn Brooks	BA 2175

Friday May 9, 2014 Workshop Session D

3:15 pm – 4:30 pm

Number	Title	Presenter(s)	Location
17	Biomedical Engineering University of Toronto	Stewart Aitchison Biomedical Sensing and the ChipCare Project Willy Wong Neural, Sensory Systems and Rehabilitation Dr. Micah Stickel	BA 2185
18	Resources and Supports for Physics Teachers	Stacey Joyce Perry Kotkas Dr. Sacha Noukhovitch	BA 2145
19	Getting the 21st century H.O.T.S.* (*higher-order- thinking-skills)	Dave Doucette Edward Gissing	BA 2155
20	Fun with Waves and Sound University of Toronto	Jason Harlow Andrew Myertholen	Physics MP125-A
21	Perimeter Institute: The New Cosmology Resource	Damian Pope Kevin Donkers	BA 2165
22	Bridging the Transition to 1st Year Physics with PER	James Fraser Queen's University Martin Williams University of Guelph Aaron Slepko Trent University Tetyana Antimirova Ryerson University	BA 2175

SATURDAY MAY 10, 2014

Saturday May 10, 2014 Workshop Session E
9:00 am – 10:15 am

Number	Title	Presenter(s)	Location
23	Engineering Design and Leadership in the High School Science Experience University of Toronto	Patricia Sheridan Jason Foster	BA 2185
24	Physics of Music	Rolly Meisel	BA 2145
25	Teaching Physics by Coding	Richard Taylor	BA 2155
26	S.T.E.M. In Model Schools for Inner Cities	Donna Quan – TDSB Director of Education Vicky Branco – TDSB Superintendent of Education Simona Emiliani	BA 2165

Saturday May 10, 2014 Workshop Session F
10:45 am – 12:30 pm

Number	Title	Presenter(s)	Location
27	"Particles Smarticles": Using Group Interactive Demonstrations to Model Particle Behavior	James Ball Saara Naudts	BA 2145
28	Represent! Multiple Representations as the Key to Deep Understanding	Chris Myer Tim Langford	BA 2155
29	Redefining Science in a School	Lisa Lim-Cole Margaret Scora	BA 2165



GET INVOLVED IN OAPT!

Join a Committee! We have many tasks “BIG” and “small”. Every contribution matters!

Write an Article for the OAPT Newsletter!

Contact Lisa Lim-Cole at:
Lisa_Cole@durham.edu.on.ca