**Ontario Association of Physics Teachers**

**C:\Users\rollym-i7-860\Desktop\ECE UT Signature RGB P655 PC 2010.tif Electrical and Computer Engineering**

**University of Toronto**

**Conference 2014**

**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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 **May 8 – 10, 2014**

**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** |
| **01 Negative-Refraction, Super-Resolution Imaging and Invisibility with Metamaterials**  George V. Eleftheriades  Electrical and Computer Engineering  University of Toronto  **Room BA 2185** | **05 Engineering Education – Emerging Trends and Innovations**  Susan McCahan  University of Toronto  **The Inverted (Flipped) Classroom Lessons Learned from a Second-Year Physics Course**  Micah Stickel  University of Toronto  **Room BA 2185** | **09 STEM, STSE and Relevance**  Mars Bloch  **Room BA 2165** |
| **02 Perimeter Institute: What Good is a STEM Education?**  Damian Pope  **Room BA 2145** | **06 Outreach Opportunities**  Sara Cormier, Patrick Whippey, DEEP/Engineering  **Room BA 2145** |
| **03 Girls in Science**  Shohini Ghose  Centre for Women in Science at WLU  Dawn Britton  University of Toronto Engineering Outreach  Chandra Boon  Mindset  **Room BA 2159** | **07 Universal Tool for Tinkering**  Hasan Shodiev  Sir Wilfrid Laurier University  **Room BA 2159** | **10 Engineering Contests and STEM**  Roberta Tevlin  Andrew Moffat  **Room BA 2175** |
| **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  **Room BA 2155** | **08 Applying Physics Principles to Build a Career Roadmap**  Carolyn Burgess  Ian Burgess  **Room BA 2155** |  |

**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 Slepkov  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**](mailto:Lisa_Cole@durham.edu.on.ca)