



From Theory to Reality and Back Again

Thursday May 23, 2013

This year's theme largely stems from our good fortune to have many key mathematics education researchers visiting the Niagara region for a CMESG meeting which follows this conference. Two of these researchers, Dr. John Mason and Dr. Christine Suurtamm, will be joining us to share their research and connecting it to the realities of the classroom.

In addition to hearing from education researchers we also have several local teachers sharing their own experiences. They will share how they start with problems grounded in context or concrete materials and use these to help students make connections to the more abstract or theoretical.

Schedule of Events

Time	
3:45 to 4:15	Registration Welch Hall, Brock University
4:15 to 5:30	Keynote: Dr. John Mason
5:30 to 5:45	Break
5:45 to 6:45	Workshops
7:00	Dinner Alphie's Trough (Faculty Club), Brock University

door prizes

Come to dinner and get a chance to win door prizes to local restaurants, attractions and spas

Keynote

Dr. John Mason



Fifty years ago, growing up in Canada, John was asked to tutor a fellow student in mathematics, and he has taught someone some mathematics every year since then. Inspired by George Pólya, Caleb Gattegno, J. G. Bennett and Dick Tahta, his central interest and concern is how to support people in learning mathematics, and how to support those who wish to support others in developing their mathematical thinking. Founder member and sometime leader/director of the Open University Centre for Mathematics Education, John has written dozens of books, pamphlets and OU teaching materials in support of the teaching of mathematics, and conducted workshops all over the world. Recently retired from the Open University, he continues to work on mathematics himself so as to be sensitive to the struggles of others in learning and teaching mathematics.

Keynote:

Exploiting Exercises so as to Enrich Procedural Fluency with Conceptual Appreciation

Presenter: Dr. John Mason

Audience: Grades 7-12

Are you finding yourself increasingly training students to carry out procedures without them being interested or concerned about appreciating the underlying concepts?

While trained behaviour may produce local success (on an examination) it tends to be inflexible and vulnerable to forgetting. Being able to reconstruct a procedure from conceptual understanding and appreciation of underlying structure contributes to flexibility to adapt the procedure to unusual and non-routine situations. Participants will be invited to consider how sets of routine exercises can be adapted, modified and extended in order to promote mathematical thinking in general, and conceptual understanding in particular.

Session B: Workshops

B1: The Castle and the Princess

Presenter: Byung Chun, teacher currently working with the Fields Institute and
councilor for CMA Math Camp Audience: Grades 9 - 12

A prince wishes to visit a princess living in a castle with 4 doors (some conditions apply). We will explore methods that students might use to solve this problem, and also examine enrichment opportunities (beyond CEMC Math Contests) for students wishing to further explore mathematics.

B2: A Century of Cool Teaching Ideas

Presenters: MaryAnn Fee; Angelo Lillo; Elizabeth Pattison; Deanna Ward Audience: Grades 9 - 12
Teachers, District School Board of Niagara

This team of teachers has more than one hundred years of teaching experience between them. In this session, they'll each share some lessons and activities that have made them say "Wow, that's one of the coolest things I've ever seen!" Lessons/activities will be shared from Grades 9 to 12; applied to university; no technology to "I hope I don't blow a fuse" levels of technology. Electronic copies will be made available to participants.

B3: Sometimes the Math is the Context

Presenter: Pamela Chun Audience: Grades 9 - 12
Teachers, District School Board of Niagara

"Transfer of knowledge and skills to new contexts. Making connections within and between various contexts."

What's greater than students talking about math? We've spent the past year creating problems that are challenging to kids, but don't blow them out of the water. Problems that all kids can enter into, and experience some success with. Problems that address the *connections* and *new contexts* components of our achievement chart. At this session, participants will explore some of our problems from Grades 9 – 12 (Academic/University). If you have any you'd like to share, we'd love to see 'em!

Dinner Options

Main Entree:

- Niagara Peach & Green Chili Glazed Chicken Breast with Ontario maple mustard sauce, served with roasted garlic mashed potatoes;
- or
- Vegetarian:** Grilled Portobello & Rosemary Caramelized Onion Wellington, served with lemon parsley roasted potatoes

Both include Caesar Salad with asiago & pesto caesar dressing, Marinated Vegetable Salad, Rolls & Butter, Old-Fashioned Apple Strudel, and Coffee & Tea

Registration Information

Workshop Fee: \$15.00 for OAME member
\$20.00 for non-member
\$10 for Faculty of Education Students

Dinner: additional \$25.00

All registration will be done electronically at www.oame.on.ca

Go to **Conferences/Events** on the left hand side of the screen, then select **Chapter Conferences**.

If you have questions regarding registration, please e-mail: Bob.Minor@dsbn.org

Driving Direction to Brock University

Travel the Queen Elizabeth Highway (QEW) in the direction of Niagara Falls. Follow the Queen Elizabeth Way to St. Catharines. At Exit 49, turn onto Highway 406 and continue until you reach St. Davids Road. Take the St. Davids Road West Exit and follow until you reach Glenridge Avenue. Pass through the traffic light onto the Brock Campus.

Parking is available in Lot D. When arriving, tell the parking attendant you are attending the OAME conference to be admitted into the lot.

To locate Welch Hall, please view the map of the Brock Campus available at <http://www.brocku.ca/maps/>

Other questions can be directed to:

Liisa.Suurtamm@dsbn.org or Elizabeth.Pattison@dsbn.org