



*Ontario Association for Mathematics Education*  
*Association ontarienne pour l'enseignement*  
*des mathématiques*

## *2005 Leadership Conference*

*for teachers, administrators, co-ordinators/consultants*



*Emergence: Independent educators collectively  
bring into focus a new vision of mathematics education.*

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**FEBRUARY 24-26, 2005**  
**Holiday Inn Select**

(970 Dixon Rd Toronto Ontario)

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An opportunity to share best practices as well as discuss emerging ideas and issues  
and focus on ONE of the following:

- Grades JK - 3 --- Creating a community of mathematicians in the primary years
- Grades 4 - 6 --- Mathematics Teaching and Learning as a Complex System
- Grades 7 - 8 --- Continuous Opportunities to Navigate, Negotiate, and Create with Teamwork in Mind
- Grades 9 - 10 --- Trials, Tribulations, and Triumphs
- Grades 11 - 12 --- Wrapping Up the Content

**All Inclusive Registration Fee: \$428/\$458 (OAME/non-OAME)**

Includes: All sessions, 2 nights accommodation (2 people/room),  
meals, banquet, receptions, publishers' and suppliers' displays

## WHY SHOULD TEACHERS, ADMINISTRATORS, AND CONSULTANTS ATTEND THIS CONFERENCE?

- ...to improve instruction in math classrooms to provide a rich and meaningful experience for students;
- ... to share best practices in order to see, hear, and experience mathematics in a classroom
- ... to identify resources that are effective in building mathematics understanding;
- ... to acquire practical strategies to share with colleagues about program improvement;
- ... to discuss and share thoughts and views on current emergent ideas and issues with other educators

### *Program Overview*

DAY	TIME	ACTIVITY
<b>Thursday Feb. 24, 2005</b>	6 p.m. - 8 p.m.	Registration outside the Trillium Ballroom
	8 p.m. - 9 p.m.	OPENING KEYNOTE SPEAKER – <b>Richard Hoshino: “How Many Rectangles?”</b> In this talk, we will carefully investigate and unpack a mathematical problem involving counting rectangles. Starting with this problem, we will discover many important and beautiful mathematical ideas that straddle different topics in the K-12 curriculum. Together, we will "draw out" the math that can be used in both elementary and secondary classrooms. Using discovery and playful exploration, we will generate ways in which our students can gain a sense of "doing mathematics".
	9 p.m. - 11 p.m.	Reception
<b>Friday Feb. 25, 2005</b>	7:30 a.m. - 8:15 a.m.	Breakfast
	9 a.m. - 12 noon	WORKGROUPS and LEADERS Grades JK – 3: Anna Jupp, Laurie Moher Grades 4 - 6 : Mary Lou Kestell, Kathy Kubota-Zarivnij Grades 7 - 8 : Debbie Banks, Sam Crosby, Tracy Staples Grades 9 - 10 : Elizabeth Pattison, Gordana Maljkovic Grades 11 - 12: Kelly Blair, Karen Bryan
	12 :15 - 2:15 p.m.	Publishers'/Suppliers' Luncheon: preview of new products and an opportunity to view the many displays
	2:30 p.m. - 4:30 p.m.	WORKGROUPS continue
	4:30 p.m. - 6:30 p.m.	Free Time
	6:30 p.m. - 7 p.m.	Cash bar
	7 p.m. - 9 p.m.	BANQUET & KEYNOTE SPEAKER – <b>Tom Steinke: “What could math learning look like? The Power of Lesson Study”</b> Lesson Study is an exciting new addition to our Ontario repertoire of professional learning for math educators. Tom will explore the possible ways Lesson Study might help bring some of our current math education initiatives to life for real teachers and real students in real classrooms.
	9:15 p.m. - 11 p.m.	Reception
<b>Saturday Feb. 26, 2005</b>	7:30 a.m. - 8:30 a.m.	Breakfast
	9 a.m. - 11 a.m.	WORKGROUPS continue
	11 a.m. -11:15 a.m.	Checkout (before lunch and closing session)
	11:15 a.m.- 12:30p.m.	LUNCH, THANK YOUs AND GOOD-BYEs!

#### ABOUT THE KEYNOTE SPEAKERS

##### **Richard Hoshino**

Richard is a Ph.D student in mathematics at Dalhousie University in Halifax, Nova Scotia. He is a member of the problems committee for the Grade 12 Euclid contest and the Canadian Mathematical Olympiad, and is the founder and coordinator of the Nova Scotia High School Math League. Richard won a silver medal for Canada at the 1996 International Math Olympiad, and has coached at over twenty camps for the top high school mathematics students in Canada. Richard is a Fellow of the new Action Canada program, an initiative designed to build future leaders of Canada.

##### **Tom Steinke**

Tom has a keen interest in mathematics education and teacher professional learning. Through Lesson Study, Tom is currently working on helping to bring *Leading Math Success* to life in his board in Ottawa where he is the secondary Math and Science consultant for the Ottawa-Carleton CDSB. Tom has been known to dabble with technology on the odd occasion as well.

## ***Program Details***

***Each participant will remain with the same workgroup for a total of 7 hours of workshop time***

### **GRADES JK-3 WORKGROUP**

#### **Creating a community of mathematicians in the primary years**

Through student work samples and video clips see how mathematical thinking emerged in an actual primary classroom. Experience sample lessons and discuss strategies to foster the same powerful mathematical knowledge, reasoning, and communication in your own unique classroom. Take away helpful hints and tasks you can use immediately in your program. During this action packed session you will talk, make, laugh, learn, share, and have fun with mathematics. Participants should bring a favourite resource and a task to share with other JK-3 teachers.

#### **Workgroup Leaders:**

**Anna Jupp** is a Mathematics/Numeracy Instructional Leader with the Toronto DSB and a Vice President of OAME. She has been a Primary/Junior teacher and a member of the Early Math Strategy Expert Panel.

**Laurie Moher** is an Early Literacy Teacher with the Kawartha Pine Ridge DSB and an OAME Director. She has been a Primary/Junior teacher, a Primary/Junior Consultant and a member of the Early Math Strategy Expert Panel

### **GRADES 4 - 6 WORKGROUP**

#### **On the Edge of Emergence ... Mathematics Teaching and Learning as a Complex System**

How can the phenomenon of the teachable moment be the norm rather than the exception in our mathematics classrooms? Complexity science notions make explicit the interdependent conditions necessary for effective mathematics teaching and learning for students and for teachers. So, as a community of learners, we will explore the relationship between Complexity Science and mathematics education and build pedagogical strategies that can be applied in your classroom, in terms of these topics:

- Understanding Complexity Science within and outside of mathematics education,
- Analyzing mathematics learning episodes in junior classrooms (i.e., lesson study), from a complexity science perspective,
- Relating the conditions of Complexity and the emergence of a mathematical learning community of students and teachers,
- Using principles of Complexity to prepare for and implement an effective mathematics program

#### **Workgroup Leaders:**

**Kathy Kubota-Zarivnij** is currently the program coordinator of mathematics for Toronto CDSB.

**Mary Lou Kestell** is currently an educational officer for EQAO. Both workshop leaders have extensive experience in teacher professional development workshops focusing on junior mathematics education and mathematics pedagogy. As well, they have been participatory members of the Canadian Complexity Science in Education community for a few years now.

### **GRADES 7- 8 WORKGROUP**

#### **Project C.O.N.N.E.C.T.**

#### **Continuous Opportunities to Navigate, Negotiate, and Create with Teamwork in Mind**

Math in the Intermediate classroom is based on co-operative, hands-on problem solving, including project-based, cross-curricular opportunities to connect math, with the adolescent learner. Participants will explore specific tasks that connect these classroom characteristics with appropriate and engaging assessment opportunities.

#### **Workgroup Leaders:**

**Sam Crosby** is a Math Leader with the Upper Canada DSB currently delivering a cross-curricular approach in her Grade 8 class.

**Debbie Banks and Tracy Staples** are Special Assignment Teachers with the Upper Canada DSB who support teachers of Grades 4-8 to implement engaging, but balanced math and literacy programs. They also support Grade 7-10 teachers as they explore the use of TIPS and math manipulatives with the applied learner in mind.

### **GRADES 9-10 WORKGROUP**

#### **Trials, Tribulations and Triumphs**

*The trials were many, the tribulations came fast.*

*Through thick and through thin, we triumphed at last.*

After ten semesters of the "new" grade 9 and 10 curriculum, we've tried it all and have found many things that have worked for us and for our students. This workgroup will examine rich learning tasks, effective uses of technology and varied assessments for the grade 9 and 10 courses. Participants should bring a TI-83+ graphing calculator.

#### **Workgroup Leaders:**

**Elizabeth Pattison** is the Head of Mathematics at Westlane Secondary School in Niagara Falls. She is also a T<sup>3</sup> Instructor with Texas Instruments and spent two years at EQAO working on the Grade 9 Assessment.

**Gordana Maljkovic** is a teacher at Westlane Secondary School. She has been involved in board curriculum writing projects and recently authored the on-line mathematics courses for the District School Board of Niagara.

### **GRADES 11-12 WORKGROUP**

#### **Wrapping Up the Content**

Ensuring student success at each step often depends upon mastering key expectations from previous courses. We will examine expectations for a variety of courses at the senior level prioritizing key ideas for continued success. The emphasis of the workshop will be in designing, creating and sharing assessment and teaching strategies to effectively meet these key expectations. Discussions will include how "Professional Learning Communities" in your own school can provide continued professional growth and curriculum development in this area. Participants should bring a TI-83+ graphing calculator.

#### **Workgroup Leaders:**

**Kelly Blair** is Math and Business Head at Rideau District High School in the Upper Canada DSB, a member of her board's "Math Focus Team" and her school's "Literacy Team".

**Karen Bryan** is a Special Assignment Teacher with the Upper Canada DSB, a member of her board's "Math Focus Team" and Chair of Subject Council for the Eastern Region of UCDSB.

