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Computer Maths: Curiosity, Art, Story!

The First International Conference on Creative Mathematical Sciences Communication

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This is an INVITATION to join a dedicated group of visionary international computer and mathematical scientists, educators and teachers at all levels, and industry and government leaders in practical discussions about new ways of exciting interest in ICT and mathematics.

The First International Conference on Creative Mathematical Sciences Communication, *Computer Maths: Curiosity, Art, Story!*, starts at 1pm on Friday, August 2, 2013, at Charles Darwin University in Darwin, Australia, with speakers and events over the weekend August 2–5. From Tuesday to Saturday, August 6–10, the conference continues in the Australian Outback with discussions about the future of Computer Science Unplugged, a Master's degree in math communication, and creating more whole-body activities.

The conference website is <http://www.cdu.edu.au/conference/csmaths>.

Computer Maths: Curiosity, Art, Story! has several goals. Participants will:

- Examine how mathematical THINKING strategies nurture 21st century competencies.
- Look at the process of sharing unsolved maths problems at the FRONTIERS of computer science and maths.
- Determine methods of fostering CURIOSITY, enthusiasm and perseverance in maths.
- Design CULTURAL and whole body activities that show understanding of and relevance to INDIGENOUS peoples, and connect math with the inner self and community.

- Discuss with Tim Bell, Mike Fellows and others the future directions of Computer Science Unplugged! which started as a grass-roots movement and now is translated into 18 languages.¹
- Share outreach ideas, projects, and programs that have inspired new research questions. For example, Mike Fellows will describe how “Kid Crypto” inspired the new research direction of Polly Cracker crypto systems.
- Establish outreach and communication as a recognized and respected research field, possibly by developing a Master’s degree in Creative Mathematical Sciences Communication (possibly a MOOC between several universities) and a research journal to share ideas.

There will be presentations by scientists and educators from around the world, and lots of actively engaged participation by all. Here are some of the program highlights:

- Tim Bell and Mike Fellows, creators of Computer Science Unplugged! will lead us in designing new cultural and whole body activities showing understanding and relevance to all peoples, and connecting math with the inner self and community.
- The Directors of the New Zealand art academy, The Learning Connexion, Jonathan and Alice Milne will help us use art to release our creativity to actualize the designs.
- Erik Stern, the originator of the “Guys Who Dance about Math” Santa Cruz dance troupe is offering a session on Motion and Dance, perfect for cross-discipline teachers of writing, athletics, science, math, VET, music. From Kindergarten to graduate school, Erik will show us how to use body activities to teach symmetry, probability and more and to make abstract ideas concrete using motion.
- In her session, “Critical thinking for the 21st century in your classroom,” Geri Lorway, Teacher Coach of Thinking 101 from Alberta will present materials for teachers to put into practice quickly: thinking, organizing data, mathematical reasoning.

¹“Computer Science Unplugged! is a collection of free learning activities that teach Computer Science through engaging games and puzzles that use cards, string, crayons and lots of running around.” From <http://csunplugged.org/>, accessed July 31, 2013.

- The Frankfurt Town Council and German Ministry of Culture is sponsoring actress and playwright Verena Specht-Ronique who will present Hesse's The Glass Bead Game, adapted for ExperiMinta Science Center Frankfurt for an evening of "Mathematics and Theatre" where we will discuss how to convey math ideas using drama.
- An evening of outdoor math activities, MATH on the GREEN will present hands-on, bodies-on activities such as walking along paths on a tarpaulin to experience parallel sorting, or pacing off lengths of rope to find the shortest Traveling Salesman route. This event is free and open to the community.

GOOGLE is arranging live-streaming and YouTube of the sessions. Send your email or school email to receive the broadcast schedule.

We look forward to your participation.

For more information, please contact:

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