

**CMS WINTER 2003 MEETING**  
**Simon Fraser University, Vancouver**  
**December 6 – 8, 2003**

**SCIENTIFIC REPORT**

The Canadian Mathematical Society Winter Meeting 2003 was hosted by Simon Fraser University at its Harbour Centre Campus, December 6 - 8, 2003. The meeting consisted of four funded core research sessions, 9 unfunded research sessions (including one on Model Theory and Recursion Theory in honour of Alistair Lachlan) and a short course. Measured by the comments of participants, the meeting was a great success.

We were particularly successful with the six plenary speakers, including the Nevanlinna Prize winner Madhu Sudan:

**MADHU SUDAN** (Radcliffe Institute for Advanced Study) - "List decoding of error correcting codes"

**DEBORAH BALL AND HYMAN BASS** (Michigan) - "The role of definitions in teaching and learning mathematics"

**ROBERT CALDERBANK** (Princeton) - "Quantum computers and cellular phones"

**ANAND PILLAY** (Illinois at Urbana-Champaign) - "Stable theories, examples, and applications"

**TOM ARCHIBALD** (Acadia)

"France, Germany, and the making of modern mathematics"

**ANDREW GRANVILLE** (Montreal) - "Uncertainty principles in arithmetic".

The two Prize Lectures were excellent:

**JINGYI CHEN** (UBC), Coxeter-James Lecture - "Recent developments in mean curvature flow of higher codimension"

**ALINA CARMEN COJOCARU** (Princeton), CMS Doctoral Prize - "Elliptic curves modulo  $p$ "

The research sessions, organizers and numbers of speakers were as follows:

**Combinatorics:** Petr Lisonek (SFU), Brett Stevens (Carleton), 14

**Dynamical Systems & Celestial Mechanics:** Florin Diacu (UVIC), 19

**Graphs and Matroids:** Luis Goddyn (SFU), Ladislav Stacho (SFU), 15

**Harmonic Analysis:** Izabella Laba (UBC), Alex Iosevich (Missouri at Columbia), 17

**History of Mathematics:** J. L. Berggren (SFU), 9

**Mathematical Biology:** Leah Keshet (UBC), 17

**Mathematical Education:** Malgorzata Dubiel (SFU), 4

**Model Theory and Recursion Theory:** Robert Woodrow (Calgary), Bradd Hart (McMaster), 15

**Nonlinear Partial Differential Equations:** Keith Promislow (SFU), Rustum Choksi (SFU), 12

**Number Theory:** Michael Bennett (UBC), David Boyd (UBC), Peter Borwein (SFU), Imin Chen (SFU), Stephen Choi (SFU), 13

**Operator Algebras:** Ian Putnam (UVIC), Marcelo Laca (UVIC), 22

**Quantum Cohomology and Mirror Symmetry:** Kai Behrend (UBC), 7

**Representations of Associative Algebras:** Vlastimil Dlab (Carleton), Shiping Liu (Sherbrooke), 14

**Universal Algebra and Lattice Theory:** Jennifer Hyndman (UNBC), 13

The speakers for the Short-course on Cryptography were as follows:

**DOUG STINSON** (Waterloo) - "Introduction to cryptography"

**NEAL KOBLITZ** (Washington) - "Introduction to elliptic curve cryptography"

**HUGH WILLIAMS** (Calgary) - Cryptography and number theory

**MIKE MOSCA** (Waterloo) - Quantum computing and quantum cryptography

Malgorzata Dubiel did a terrific job with the local arrangements and Alistair Lachlan produced the program. Enormous thanks are due to Graham Wright (CMS) for his guidance and encouragement throughout the organizational period, while the CMS team of Nathalie Blanchard, Alan Kelm, Suzanne Lalonde and Yvette Roberts provided invaluable support and brought a welcome level of professionalism to the organization of the meeting. A special thanks to Monique Bouchard for her early guidance in the preparation process.

Norman R. Reilly  
Meeting Director.