

# FUTURE DIRECTIONS IN ALGORITHMIC NUMBER THEORY

## Workshop Schedule

Monday, March 24, 2003

9:15 am - Manindra Agrawal: A polynomial time for testing primality

11:00 am - Hendrik W. Lenstra, Jr.: Primality testing with pseudofields

Lunch

2:30 pm - Alan Lauder: Counting solutions to equations in many variables over finite fields

4:00 pm - Bas Edixhoven: About point counting over arbitrary finite fields

5:10 pm - Manindra Agrawal: Finding quadratic nonresidues

5:50 pm - Brainstorming session [Moderated by Jonathan Pila]

Tuesday, March 25, 2003

9:00 am - Carl Pomerance and Daniel Bleichenbacher: Constructing finite fields

10:45 am - Felipe Voloch: Subgroups of  $(\mathbb{F}_q[x]/(h))^*$

11:30 am - Problem session [Moderated by Jonathan Pila]

Lunch

2:00 pm - Pedro Berrizbeitia: Sharpening AKS for a large family of numbers

2:45 pm - Qi Cheng: Primality proving via one round in ECPP and one iteration in AKS

3:45 pm - Daniel Bernstein: Randomized primality proving in essentially quartic time

Wednesday, March 26, 2003

9:00 am - Alice Silverberg: Applications of algebraic tori to cryptography

10:45 am - Arjen Lenstra: Factoring integers

11:30 am - Daniel Bernstein: Rethinking the Number Field Sieve—an update

Afternoon hike!

Thursday, March 27, 2003

9:00 am - Daqing Wan: Partial counting of rational points over finite fields

10:45 am - Jean-Marc Couveignes

11:30 am - Mark Watkins: Computing the number of points on a curve

Lunch

2:00 pm - Kiran Kedlaya: Counting points using p-adic cohomology

3:00 pm - William Stein: The modular forms database project

4:00 pm - Problem session [Moderated by Peter Stevenhagen]

Friday, March 28, 2003

9:00 am - Siguna Mueller: an efficient method for recognising industrial-grade primes

9:25 am - Preda Mihailescu: Practical AKS?!

9:50 am - Rene Schoof: Cohen/Lenstra Heuristics

10:45 am - Problem session in working groups

Lunch

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- 2:00 pm - Shuhong Gao: Deterministic factoring under GRH
- 2:45 pm - Victor Shoup: Kalai's algorithm for generating random factored integers
- 3:45 pm - Problem session [Moderated by Michael Zieve]
- 5:00 pm - Dan Goldston: Small gaps between consecutive primes
- 6:00 pm - Reception