

- Research Interests**
- Algebraic Number Theory
  - Computational Number Theory
  - Arithmetic Geometry
- Employment**
- **Warwick Mathematics Institute** (UK), Marie-Curie Research Fellow, April 2009-2011.
  - **Institut für Experimentelle Mathematik** (Germany), Postdoctoral Fellowship, October 2007-March 2009.
  - **University of Sydney**, Visiting Scholar (MAGMA team), August-September 2007.
  - **University of Calgary**, PIMS Postdoctoral Fellowship 2005–2007, Postdoctoral Fellowship 2003–2004.
  - **Brandeis University**, Visiting Postdoctoral Fellowship, Spring 2003 and Lecturer Spring 2005.
- Education**
- **McGill University** at Montreal, Canada, Ph.D., August 2002, *Explicit computations of Hilbert modular forms on  $\mathbf{Q}(\sqrt{5})$* .
- Publications**
8. *Computing the image of the base change map for Hilbert modular forms*. preprint.
  7. *A non solvable Galois extension of  $\mathbf{Q}$  ramified at 2 only*, with a supplement by Jean-Pierre Serre. To appear in *C. R. Math. Acad. Sci. Paris*.
  6. *Computing Hilbert modular forms for fields with non-trivial class group* (15 pages), with S. Donnelly, ANTS 8 Proceedings. *Lecture Notes in Computer Science*. Vol. **5011** (2008), 371–386.
  5. *On the computation of algebraic modular forms* (15 pages), submitted.
  4. *Computing Hilbert-Siegel modular forms of genus 2 over  $\mathbf{Q}(\sqrt{5})$  via the Jacquet-Langlands correspondence* (14 pages), with C. Cunningham, to appear in *Experimental Mathematics*.
  3. *An algorithm for modular elliptic curves over real quadratic fields* (16 pages), to appear in *Experimental Mathematics*.
  2. *Quaternionic  $M$ -symbols, Brandt matrices, and Hilbert modular forms*, *Mathematics of Computations*, Vol. **76**, No 258 (2007), 1039–1057.
  1. *Explicit Computations of Hilbert modular forms on  $\mathbf{Q}(\sqrt{5})$* , *Experimental Mathematics*, Vol. **14**, No 4 (2005), 457–466.
- Computation**
- The Hilbert Modular Forms Package: Release in Magma, January 2009.
  - The Hilbert Modular Forms Database:  
<http://www.uni-due.de/~hx0043>. (in progress).

**Teaching**

**Institut für Experimentelle Mathematik**

- *Introduction to the computation of Hilbert modular forms*, Summer 2008.

**University of Calgary**

- *Linear algebra I*, Fall 2006.
- *Introduction to Abstract Algebra*, Summer 2004.

**Mathematical Sciences Research Institute**

- *Computing with modular forms* (graduate workshop), Summer 2006.

**Brandeis University**

- *Introduction to Biostatistics*, Spring 2005.
- *The arithmetic of elliptic curves*, graduate course, Spring 2005.

**McGill University**

- *Teaching Assistant* (various courses), Fall 1995–Spring 2002.

**Recent Talks**

- November 2008, Number Theory Seminar, Warwick University, Warwick, UK.
- July 2008, Seminario di teoria dei numeri, Milan University, Milan, Italy.
- May 2008, ANTS 8, Banff, Alberta, Canada.
- April 2008, Séminaire de théorie des nombres, Université Jussieu, Paris, France.
- March 2008, Number Theory Seminar, Toronto University, Toronto, Canada.
- December 2007, Oberseminar, Duisburg-Essen University, Essen, Germany.
- September 2007, Number Theory Seminar, University of Sydney, Sydney, Australia.
- September 2007, Computational Algebra Seminar, University of Sydney, Sydney, Australia.
- July-August 2007, *L*-functions and modular forms, AIM Institute, Palo Alto, CA, USA.
- Jun 2007, Modular Forms: Arithmetic and Computation, BIRS, Banff, AB, Canada.
- March 2007, Quebec-Vermont Number Theory Seminar, Montreal, Qc, Canada.
- January 2007, CMS Meeting, Ottawa University, ON, Canada.
- Jun 2006, Microsoft Research Division, Richmond, WA, USA.
- Jun 2006, CMS Meeting, University of Calgary, AB, Canada.
- April 2006, AMS Regional Meeting, San Francisco state University, San Francisco, CA, USA.
- April 2005, Five Colleges Number Theory Seminar, Amherst, MA, USA.
- March 2005, Modular Forms Seminar, Harvard University, MA, USA.

- November 2004, Algorithmic methods in Number Theory, BIRS, Banff, AB, Canada.
- April 2003, Fellowship of the Ring, Brandeis University, Waltham, MA, USA.
- January 2002, Far Hills Workshop on Automorphic forms, Montréal, Qc, Canada.
- July 2002, CMS meeting, Laval University, Quebec City, Qc, Canada.

**Personal**

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**References**

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