

Personal

Place of Birth: Côte d'Ivoire

Nationality: Côte d'Ivoire, Canada

Languages: English(fluent), French(fluent), German(basic)

Address

Warwick Mathematics Institute

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Research Interests

- Algebraic Number Theory
- Computational Number Theory
- Hilbert Modular Forms
- Automorphic Forms
- mod p and p -adic Langlands Programme

Employment

- **Warwick University**, Assistant Professor, October 2011-Present.
- **Warwick University**, Marie-Curie Research Fellow, July 2009-July 2011.
- **IEM–Universität Duisburg-Essen**, Research Fellowship, October 2007-July 2009.
- **University of Calgary**, PIMS Postdoctoral Fellowship June 2005-July 2007.
- **Brandeis University**, Postdoctoral Fellowship, January-July 2005, January-July 2003.
- **University of Calgary**, Postdoctoral Fellowship, November 2003-December 2004.

Education

- **McGill University**, Canada, Ph.D. in Mathematics, 2002,
Explicit computations of Hilbert modular forms on $\mathbf{Q}(\sqrt{5})$, under Henri Darmon.
- **Université Laval**, Canada, MSc in Statistics, 1995.

Grants/Fellowships

- EPSRC Career Acceleration Fellowship, October 2011-September 2016, £733,721.
Project: *Explicit methods for higher rank algebraic automorphic forms.*
- Marie Curie Fellowship, August 2009-2011, £161,793.
Project: *Hilbert modular forms and Diophantine applications.*
- PIMS Postdoctoral Fellowship, July 2005-August 2007, CAN\$85,000.
- CRM-ISM, Postgraduate Fellowship, Fall 1998, CAN\$5,000.

Supervision

- Postdoctoral Fellow: Marc Masdeu, January 2014-August 2015.
- PhD student: Christopher Birkbeck, started October 2013.
- Fourth Year Project: Emily Ames: *Birch and Swinnerton-Dyer Conjecture*, 2014.
- Third Year Project: Alexander Best: *Efficient enumeration of orders in number fields*, 2014.
- Third Year Project: Kwok. W. Tsoi: *Eichler-Shimura construction for classical newforms*, 2013.

Algorithms/Packages

- The Hilbert Modular Forms Package (one of the creators)
- C, Magma, Sage, PARI, Python, MATLAB, HTML, L^AT_EX.

Teaching

Warwick University

- *Introduction to elliptic curves*, First Term 2010-2013.
- *Computational aspects of Hilbert modular forms*, Taught Centre Course: Bristol, Cambridge, Imperial and Warwick, First Term 2009.

CRM Barcelona

- *Explicit methods for Hilbert modular forms*, mini-course in May 2010.

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), Summer School 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.

Upcoming Visits

- March 12-17, 2017, New Trends in Arithmetic and Geometry of Algebraic Surfaces, BIRS, Banff, AB, Canada.
- September 11-24, 2016, Visit to University of Tokyo, Tokyo, Japan.
- September 5-9, 2016, Automorphic forms: Theory and Computation, King's College London, London, UK.
- July 11-15, 2016. Workshop on Bianchi Modularity, University of Luxembourg, Luxembourg.
- June 30-July 15, 2016, Visit to the University of Barcelona, Barcelona, Spain.
- June 20-24, 2016, CNTA XIV, Calgary University, Calgary, AB, Canada.
- June 16-18, 2016, Summer School in Explicit Methods for Abelian Varieties, Calgary University, Calgary, AB, Canada.

Recent Conferences: Invited Speaker

- 21 November-6 December 2015, Barcelona Number Theory Seminar, University of Barcelona, Barcelona, Spain.
- 19 - 23 October 2015, Explicit Methods for Modularity of K3 Surfaces and Other Higher Weight Motives, ICERM, Providence, RI, USA.
- 28 September - 2 October 2015, Modular Forms and Curves of Low Genus: Computational Aspects, ICERM, Providence, RI, USA.
- 15 - 19 June 2015, Frontiers in Serre's Modularity Conjecture: Torsion and Low Weights, University of Luxembourg, Luxembourg.
- 1-12 September 2014, Workshop on L-functions and Modular Forms, ICTP, Trieste, Italy.
- August 25-29, 2014, Sage Days 61: Quaternion Orders and Brandt Modules, Copenhagen, Denmark.
- July 12-16, 2014, Conference on automorphic forms, University of Sheffield, Sheffield, United Kingdom.
- August 25-30, 2013, Effective methods for Darmon points, Centro de Ciencias Pedro Pascual, Benasque, Spain.
- May 6-10, 2013, Algorithms for lattices and algebraic automorphic forms, AIM, Palo Alto, CA, USA.
- April 22-26, 2013, Caculs effectifs en théorie de Hodge p -adique, CIRM Luminy, Marseille, France.
- March 18-22, 2013, Explicit Methods for Modular Forms, Warwick University, Coventry, UK.
- June 20, 2012, AKLS Meeting at Max-Planck Institute for Mathematics, Bonn, Germany.
- April 26-29, 2012, Atkin Memorial Workshop, University of Illinois at Chicago, Chicago, USA.
- 29 August-8 September 2011, Computations with Modular Forms 2011, Heidelberg, Germany.

Recent Conferences/Workshops

- 14-18 September 2015, p -adic Hodge theory and Iwasawa theory, Bielefeld University, Germany.
- 23-30 August 2015, Arithmetic of Euler systems, Centro de ciencias de Benasque Pedro Pascual, Benasque, Spain.
- March 22-29, 2015, LMFDB workshop, University College of Dublin, Dublin, Ireland.
- November 9-14, 2014: Counting arithmetic objects (Ranks of elliptic curves), CRM Montreal, Université de Montréal, Montréal, Canada.
- October 19-31, 2014: Visit to Luxembourg University, Luxembourg, Luxembourg.
- 2-6 June 2014, LMFDB Workshop, Warwick University, Coventry, United Kingdom.
- July 18-28, 2011, Automorphic Forms and Galois Representations, Durham, UK.
- April 11-15, 2011, Arithmetic Statistics, MSRI, Berkeley, USA.

Recent Seminar Talks

- 18 November 2015, Nottingham Number Theory Seminar, Nottingham University, Nottingham, UK.
- October 28, 2015, Harvard Number Theory Seminar, Harvard University, Cambridge, MA, USA
- November 19, 2014, Waterloo Number Theory Seminar, Waterloo University, Waterloo, Canada.
- April 2nd, 2014, Algebraic Geometry and Number Theory Seminar, Leuven University, Belgium.
- March 6, 2014, Quebec-Vermont Number Theory Seminary, McGill University, Montreal, Canada.
- February 26, 2014, Number Theory Seminar, University of Calgary, Calgary, Canada.
- May 20, 2013, Colloquium talk, Durham University, Durham, UK.
- April 9, 2013, Sheffield Number Theory Seminar, University of Sheffield, Sheffield, UK.
- May 21, 2012, Séminaire sur les groupes réductifs et formes automorphes, University Jussieu, Paris.
- April 26, 2012, Quebec-Vermont Number Theory Seminar, McGill University, Montreal, Canada.

- April 11, 2012, Number Theory Seminar, Max-Planck Institute for Mathematics, Bonn, Germany.

Past Visits/Collaborations

- 6-20 December 2015, Visit the Mathematics Section, ICTP, Trieste, Italy.
- 21 November-6 December 2015, Visit the University of Barcelona, Barcelona, Spain.
- April 13-24, 2015, Visit to University of Calgary, Calgary, Canada.
- 09 June-09 July, 2014, École Polytechnique in Paris, France.
- March 1-16, 2014, McGill University and Centre de Recherche Mathématiques, Montreal, Canada.
- February 16-28, 2014, University of Calgary, Calgary, Canada
- August 15 - September 16, 2013, International Centre for Theoretical Physics, Trieste, Spain.
- April 29-May 4, 2012, Mathematics Department, MIT, Boston, USA.
- January-July 2012, Max-Planck Institute for Mathematics, Bonn, Germany.
- December 13-20, 2010, Institut für Experimentelle Mathematik, Essen, Germany.
- December 17-22, 2009, Institut für Experimentelle Mathematik, Essen, Germany.
- October 2009, King's College, London, Germany.
- April 2009, University of Calgary, AB, Canada.
- November 2008, The Magma Team, University of Sydney, Sydney, Australia.
- August-September 2007, The Magma Team, University of Sydney, Sydney, Australia.

Past Presentations

- December 2010, Institut für Experimentelle Mathematik Seminar, Essen, Germany.
- July 2010, Modularity Conference at CRM, Barcelona, Spain.
- May 2010, Minicourse at CRM Barcelona, Barcelona, Spain.
- March 2010, University of Nottingham Number Theory Seminar, Nottingham, UK.
- February 2010, Trimestre Galoisien, Henri Poincaré Institute Paris, France.
- February 2010, Magma Conference on L -adic functions, CRM Montreal, Canada.
- January 2010, University of Cambridge Number Theory Seminar, Cambridge, UK.
- December 2009, Heilbronn Seminar, Bristol University, Bristol, UK.
- October 2009, London Number Theory Seminar, Imperial College, London, UK.
- 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.
- June 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.
- June 2006, Microsoft Research Division, Richmond, WA, USA.
- June 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.

Referee

Referee for the journals:

- *Linear Algebra and Applications*
- *Experimental Mathematics*
- *International Journal of Number Theory*
- *International Mathematical Research Notices*
- *Bulletin/Proceedings of the London Mathematical Society*
- *Canadian Mathematical Bulletin*

References

My list of my references are available upon request.