Henri Darmon

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Born: Oct. 22, 1965, in Paris, France.

Citizenship: Canadian, French, and Swiss.

Education:
1987. B.Sc. Mathematics and Computer Science, McGill University.
1991. Ph.D. Mathematics, Harvard University.
    Thesis: *Refined class number formulas for derivatives of L-series.*

University Positions:
1991-1994. Princeton University, Instructor.
1994-1996. Princeton University, Assistant Professor.
1994-1997. McGill University, Assistant Professor.
1997-2000. McGill University, Associate Professor.
2000-   . McGill University, Professor.
2005-2019. James McGill Professor, McGill University.

Other positions:
1991-1994. Cercheur hors Québec, CICMA.
1994-   . Chercheur Universitaire, CICMA.
1998-   . Director, CICMA (Centre Interuniversitaire en Calcul Mathématique Algébrique).
1999-   . Member, CRM (Centre de Recherches Mathématiques).
2005-2014. External member, European network in Arithmetic Geometry.

Visiting Positions:
1991. IHES, Paris.
1995. Universitá di Pavia.
1996. Visiting member, MSRI, Berkeley.
1996. Visiting professor and guest lecturer, University of Barcelona.
1997. Visiting Professor, Université Paris VI (Jussieu).
1997. Visitor, Institut Henri Poincaré.
1998. Visiting Professor and NachDiplom lecturer, ETH, Zürich.
1999. Visiting professor, Università di Pavia.
2001. Visiting professor, Università di Padova.
2001. Korea Institute for Advanced Study.
2002. Visiting professor, RIMS and Saga University (Japan).

2003. Visiting Professor, Université Paris VI, Paris.
2003. Visiting professor, Princeton University.
2004. Visiting Professor, Université Paris VI, Paris.
2006. Visiting Professor, CRM, Barcelona, Spain.
2008. Visiting Professor, Université Paris-Sud (Orsay).
2009. Visiting Professor, Tata Institute of Fundamental Research, Bombay.
2010. Visiting Professor, CRM, Barcelona, Spain.
2011. NCTS, Taipei.
2013. Professeur Invité, Université Paris 6 Jussieu.
2015. Professeur Invité, Paris 7 Denis-Diderot.
2016. Visiting professor, Chinese Academy of Sciences, Beijing.

Research-based distinctions:
1990-91. Alfred P. Sloan Doctoral Dissertation Award.
1996-98. Alfred P. Sloan Research Award.
1996. G. De B. Robinson Award.
1997. André Aisenstadt Prize.
1998. Coxeter-James Prize of the Canadian Mathematical Society.
2002. E.W.R Steacie Memorial Fellowship.
2002. Ribenboim prize of the CNTA (Canadian Number Theory Association).
2003. Earle Raymond Hedrick Lecturer of the MAA.
2003. Elected fellow of the Royal Society of Canada.
2008. Killam fellowship of the Canada Council of the Arts.
2008. John L. Synge Award of the Canadian Royal Society.
2017. CRM-Fields-PIMS Prize.
2017. Cole Prize of the American Mathematical Society.
2018. Fellow of the Fields Institute.

Teaching Awards:
1993. Princeton Engineering Council's Excellence in Teaching Award.
2003. Carrie M. Derick Award for graduate teaching and supervision.
2013. David Thomson Award for Excellence in Graduate Teaching and Supervision.
2016. Leo Yaffe Award for Excellence in Teaching.

Prestigious invited lectures:
1995. Current Developments in Mathematics, Harvard and MIT.
1996. Plenary address, Annual meeting of the AMS, Orlando, Florida.
1998. Coxeter-James Lecture, CMS Winter meeting, Kingston.
2001. Plenary speaker, British Mathematical Colloquium.
2001. NSF-CBMS lecturer, Orlando, Florida.
2003. Earle Raymond Hedrick Lectures of the MAA, Boulder, Colorado.
2004. Plenary Lecture, Joint meeting of the CMS and SMF, Toulouse, France.

2006. Invited address in number theory at the International Congress of Mathematicians, Madrid.
2009. Three hour lecture series on Stark-Heegner points, Oberwolfach, Germany. (As Simons Distinguished Professor).
2009. 15 hour Mini-course on Algebraic Cycles and Rational Points, CRM, Barcelona. (with Kartik Prasanna).
2011. Lecture series, Arizona Winter school in number theory (with Victor Rotger).
2012. Hugh C. Morris Lecture, University of Calgary.
2013. Britton Lectures, McMaster University.
2014. Emil Artin Vorlesung. Universitat Heidelberg.
2015. Plenary lecture, joint AMS-MAA meeting, San Antonio, Texas.
2015. Plenary lecture, 29th Journées Arithmétiques, Debrecen, Hungary.
2015. Inaugural BGSM Colloquium, University of Barcelona.
2016. Abel Prize ceremonies and Lectures, Oslo. (With Manjul Bhargava and Simon Singh, marking the awarding of the Abel Prize to Andrew Wiles).
2017. Hua Luo-Keng Distinguished Lecture, Yau Mathematical Sciences Center, Tsinghua University

Grants:
1987-1990. NSERC '67 Doctoral fellowship.
1991-1992. NSERC Post-Doctoral research award.
1992-1994. (With Nick Katz, PI). NSF grant in Number Theory, $ 595,000.
1995-1997. Visiting fellowship from CNR (Consiglio Nazionale Delle Ricerche).
1994-1997. FCAR "Nouveaux chercheurs" grant, $ 15,000 per year.
1994-1997. NSERC research grant, $ 17,500 per year.
1997-2001. NSERC research grant, $ 30,000 per year.
2001-2008. NSERC research grant, $ 47,000 per year.
2002-2004. NSERC Steacie supplement (2 years), $ 120,000 and $ 135,000.
2004-2007. NSERC LSI (Leadership Support Initiative) Grant, $ 40,000 per year.
2008-2012. NSERC Discovery grant, $ 52,000 per year.
2008-2011. NSERC Accelerator Supplement, $ 40,000 per year.
2008-2011. FQRNT Team grant, $ 45,000 per year.
2013-2018. NSERC Discovery Grant, $ 56,000 per year. (Ranked in the top, EEE bin).
2018-2023. NSERC Discovery Grant, $ 57,000 per year. (Ranked in the top, EEE bin).

Editorial Boards:

1996-2000 and 2007-   . Annales des Sciences Mathematiques du Quebec.

1999-2002. Journal of Number Theory.

2001-2007. Editor-in-chief (with Niky Kamran), Canadian Journal of Mathematics.

2003-   . Commentari Mathematici Helvetici.

2004-2011. Journal of the Ramanujan Mathematical Society.

2005-   .International Journal of Number Theory.

2008-   . Publicacions Matemàtiques.

2015-   . Annales Mathématiques Blaise Pascal.

2016-   . Transactions and Memoirs of the AMS.

Service:

Organization of conferences:
1996. (With Andrew Granville) Special Session, AMS Annual meeting in Orlando Florida.
1996. CNTA-5 Conference, Ottawa.
1996. (With Fernando Rodriguez-Villegas), Special session, AMS meeting in Lawrenceville, New Jersey.
1997. Special session, Colloque des Sci. Math. du Quebec, Montreal.
1997. Special session, AMS meeting in Montreal.
1998-1999. CRM special year on automorphic forms and number theory.
2000. (with Benoît Larose). Colloque "Mathématiques et Société", 68th Colloque de l'ACFAS.
2001. (With Shouwu Zhang). Workshop on special values of Rankin L-series. MSRI, Berkeley.
2002. (With Eyal Goren). Workshop on Hilbert modular forms, in Ste-Adèle (Quebec).
2002. (With Jacques Hurtubise). CRM's special program on the Geometric Langlands Program.
2003. (with Chris Skinner and Andrew Wiles). AIM-sponsored activity at Princeton University on the Birch and Swinnerton-Dyer conjecture.
2004. (with Jonathan Pila). CRM-McGill workshop on Computational Aspects of p-adic Cohomology. Far Hills.
2005. (With Adrian Iovita). CRM Workshop on p-adic representations, Montreal.
2005. (With Eyal Goren). CRM Workshop on intersection of arithmetic cycles and automorphic forms, Montreal.
2005. (With Chantal David and Andrew Granville). CRM Special year in Number Theory, Montreal.
2006. (With Brendan Hassett and Yuri Tschinkel). Clay Institute summer school on the arithmetic of curves, surfaces and varieties. Gottingen,
2007. (With Romyar Sharifi, William Stein and Ken Ribet). BIRS workshop on modular forms and computations.
2007. (With Eyal Goren). Conference to mark the retirement of John Labute.
2008. (With Denis Thérien). Bellairs workshop on computational complexity.
2009. (With Eyal Goren and Mike Rubinstein). NATO Advanced Study Institute on computational problems in modular forms.
2010. (With Noam Elkies, Wee-Teck Gan, Richard Taylor, and Shouwu Zhang). Number Theory and Representation Theory, conference in honor of Benedict Gross's 60th birthday, Harvard University.

2009-2010: (With Luis Dieulefait, Bas Edixhoven, and Victor Rotger.) Special concentration period on arithmetic and modular forms, CRM, Barcelona, Spain.

2010. (With Eyal Goren). Special semester on "Number theory as experimental and applied science", CRM, Montreal.

2011. (With Jan Bruinier and Winfried Kohnen). Winter school on Serre's conjectures, POSTECH, South Korea.

2012. Winter school on the Birch and Swinerton-Dyer conjecture, POSTECH, South Korea.

2012. Bellairs workshop on pro-unipotent fundamental groups, Bellairs, Barbados.

2012. (With Alan Lauder and Minhyong Kim.) Conference on p-adic modular forms and p-adic L-functions, Oxford.

2012: (With Adrian Iovita). Special session in arithmetic geometry, CMS Winter meeting, Montreal.

2014. (With John Coates and Youngju Choie). Organising committee, ICM satellite conference on Automorphic Forms and Arithmetic, Pohang, South Korea.

2014-15. (With Andrew Granville). Number Theory Special Year. CRM, Universit de Montral.

2015. (With Manjul Bhargava and Chris Skinner). Special session on the Birch and Swinnerton-Dyer conjecture, Annual Clay Institute meeting.

2017. (With Chris Skinner and Dimitar Jetchev). Special Semester on Euler Systems and Special Values of L-functions, Bernoulli Center, Ecole Polytechnique Federale de Lausanne.

2018. (With Fred Diamond, Richard Taylor, and Marie-France Vigneras). ICM satellite conference on Modular forms and Galois representations, Rio de Janeiro, Brasil.

2018. China-India conference, Shanghai.

2019. AMS-MAA Special session, with Samit Dasgupta and Benedict Gross.

2019. Journées Arithmétiques, Istanbul. (Chair of the organising committee, Ozlem Imamoglu).

2020. CRM special semester in number theory (pending approval).

2022. (With Ben Howard, Chris Skinner, and Wei Zhang) Special semester on Euler systems and related topics, MSRI, Berkeley.

National Committees:
1998-2003. CMS International Affairs Committee.
1999-2002: CMS board of directors.
2002-2005. CMS Research Committee.
2002-2005. Steering Committee, Banff International Research Station.
2002-2004. NSERC Circle.
2004-2008. Fields Institute Scientific Advisory Panel.
2004-2007. NSERC Grant Selection Committee (Chair in 2007).

International Committees and panels:
2004. Site visit panel for Universität Münster, for the Deutsche Forschungsgemeinschaft (DFG).
2008-   . Board of trustees of the Wolfskehl foundation, Universität Darmstadt.

2009-2014. Scientific advisory board for the BSRI (Basic Science Research Center) Pohang, South Korea.

2010. Review panel for the Centers of Excellence program of the Deutsche Forschungsgemein-schaft (DFG).

2012. Site visit panel for the EPFL (Ecole Polytechnique Fédérale de Lausanne).

2015. Selection panel for ERC Advanced Research Grants.

2018. Site visit panel for the Institut Mathématiques de Jussieu (Paris).

2019. Chair, site visit panel for the IHES (Paris).

PhD students:

1998. Hassan Daghigh, "Modular forms, quaternion algebras, and special values of L-functions".
Current Position: Chancellor, Kashan University, Kashan, Iran.

2000. Ignazio Longhi, "Non-archimedean integration and special values of L-functions for elliptic curves over function fields".
Current position: Professor, Xi'an Jiaotong Liverpool University, Suzhou.

2001. Dominic Lemelin, "Modular symbols for elliptic curves over imaginary quadratic fields".
Current position: Teacher, CEGEP Marianopolis, Montreal.

2002. Lassina Dembélé, "The explicit computation of Hilbert modular forms on $\mathbf{Q}(\sqrt{5})$".
Current Position: Tenure-track Assistant Professor (Career Acceleration Fellow), Warwick University, UK.

2005. Isabelle Dechene, "Generalized jacobians in cryptography".
Last position: Tenure-track Assistant Professor, University of Ottawa. (Deceased).

2006. Matthew Greenberg, "Heegner points and rigid analytic modular forms".
Current position: Associate Professor, University of Calgary.

2007. Hugo Chapdelaine, "Explicit units in ray class fields of real quadratic number fields".
Current position: Associate Professor, Université Laval.

2008. Shahab Shahabi, "Shintani cycles and p-adic familes of modular forms".
Current Position: Teacher, CEGEP Dawson, Montreal.

2010. Marc Masdeu, "CM-cycles on varieties fibered over Shimura curves, and p-adic L-functions".
Current position: Professor, Universitat Autonoma de Barcelona.

2011. Yu Zhao, "The Birch and Swinnerton-Dyer conjecture for $\mathbf{Q}$-curves".
Current Position: Teacher at CEGEP John Abbott.

2011. Cameron Franc, "Nearly rigid analytic modular forms and their values at CM points".
Current Position: Tenure-track Assistant Professor, University of Saskatchewan.

2013. Francesc Castella, "On the p-adic variation of Heegner points".
Current Position: Tenure-track Assistant Professor, UC Santa Barbara.

2014. Luiz Takei, "Arithmetic aspects of triangle groups".
Current Position: Teacher, Dawson CEGEP.

2014. Luca Candelori, "Metaplectic stacks and modular forms of half-integral weight".

Current Position: Tenure track assistant professor, Wayne State University.

2014. Clément Gomez. "On Mazur-Tate type conjectures for quadratic imaginary fields and elliptic curves".
Current Position: French Government.

2015. Juan Ignacio Restrepo, "Stark-Heegner points atached to Cartan non-split curves".
Current Position: Mathematical researcher, silicon valley.

2015. Yara Elias, "The Euler system of generalised Heegner cycles".
Current Position: Postdoctoral fellow, Max Planck Institute.

2018. Nicolas Simard, "Petersson inner product of theta series".
Current Position: Artificial intelligence and machine learning, Montreal.

2018. Alice Pozzi, "The geometry of the eigencurve at irregular Eisenstein points of weight one".
Current Position: Post-doctoral researcher, University College London.

2019. Michele Fornea, "Twisted triple product L-functions and Hirzebruch-Zagier cycles."
Current Positions: Instructor, Princeton University, and Simons Junior Fellow, Columbia University, New York.

Current students. Francesc Gispert-Sanchez, Bruno Joyal, James Rickards, David Lillienfeldt, Isabella Negrini, Peter Xu.

Involvement with PhD Students at other institutions

2004. Samit Dasgupta. (PhD, Berkeley, under the supervision of Kenneth Ribet.) "Gross-Stark units, Stark-Heegner points, and class fields of real quadratic fields".
Current Position: Professor, Duke University

2007. Baskar Balasubramaniam. (PhD, Brandeis, under the supervision of Fred Diamond.)
Current Position: Permanent position, IIT Canpur, India.

Masters students:

1996. Nicholas Arsenault, "The class groups of arithmetically equivalent algebras".

1996. Steve Thiboutot, "Courbes elliptiques, représentations Galoisiennes et l'equation $x^2 + y^3 = z^5$".

1999. Isabelle Dechene, "Quaternion algebras and the graph method for elliptic curves".

1999. Jody Esmonde, "Parametric solutions to the generalized Fermat equation".

2000. Ian Stewart, "The rigidity method and applications".

2000. Colin Stewart, "Universal deformations, rigidity, and Ihara's cocycle".

2004. Antoine Gournay, "Integrality of Heegner points on modular elliptic curves".

2008. Jerôme Grand'Maison, "Point-counting algorithms via p-adic cohomology".

2009. Gabriel Gauthier-Shalom, "The Birch and Swinnnerton-Dyer conjecture for the Mazur-Kitagawa p-adic L-function in the presence of an exceptional zero".

2010. Luca Candelori, "Towards a p-adic theory of harmonic weak Maass forms".

2010. James Leahy, "An introduction to Tate's Thesis".

2012. Reza Sadoughian, "Rankin L-functions and the Birch and Swinnerton-Dyer conjecture".

2014. Nicolas Simard, "The Mazur-Tate pairing and explicit homomorphisms from the Mordell-Weil groups of elliptic curves to ideal class groups".

2014. Francois Seguin. "Numerical verification of a Birch and Swinnerton-Dyer type conjecture".

2017. Hao (Billy) Lee. "Irregular weight one forms with dihedral image".

Teaching experience:
1990, Winter. "Topics in Galois theory", Senior Tutorial seminar, Harvard.
1991, Fall. Calculus of one variable, Princeton.
1991, Winter. Multivariable Calculus, Princeton.
1992, Fall. Multivariable Calculus, Princeton.
1993, Spring. Mathematics for Economists, Princeton.
1993. Algebraic Number Theory and Elliptic Curves, Princeton Junior Seminar.
1993, Fall. Topics in Algebra, Princeton University.
1994, Winter. Evolution of mathematical concepts, Princeton University.
1994, Winter. Student-initiated seminar on Galois theory, Princeton University.
1994, Fall. Differential Geometry of curves and surfaces, Fall 1994.
1994, Fall. History and Philosophy of Mathematics.
1995, Winter. Wiles' proof of Fermat's Last Theorem, McGill University.
1995, Fall. Honors Linear Algebra, Princeton University.
1996, Fall. Graduate Student seminar, McGill.
1996, Fall. Algebraic Number Theory (Graduate course).
1996, Fall. Abstract Algebra I.
1997, Winter. Algebra II.
1997, Fall. Abstract Algebra I.
1998, Spring. Galois theory, Diophantine equations, and Modular forms, Nachdiplom-Vorlesung at the ETH, Zurich.
1998, Fall. Modular forms and the Birch-Swinnerton-Dyer conjecture, Graduate course, CRM.
1999, Winter. Number Theory.

1999, Fall. Higher Algebra I.
2000, Winter. Higher Algebra II.
2000, Fall. Higher Algebra I.
2001, Winter. 189-571B: Higher Algebra II.
2002, Winter. Introduction to automorphic forms.
2003, Fall. Rational points on modular elliptic curves, weekly seminar, Princeton University.
2005, Fall. Basic Algebra 1 (189-235A).
2006, Winter. Algebra 2 (189-251B).
2006 Fall. Algebra 1 (189-570A).
2007, Winter. Number Theory.
2008, Winter. Modular forms II.
2011, Winter. Number Theory.
2011, Fall. Topics in Number Theory: L-functions and modular forms.
2012, Winter. Honors Linear Algebra.
2012, Fall. Abstract Algebra I.
2013, Winter. Number Theory.
2013, Fall. Abstract Algebra I.
2014, Winter. Honors Linear algebra.
2015, Winter. Honors algebra 4.
2016, Fall. Graduate course on modular forms.
2017, Winter. Honors Algebra 4.
2017, Fall. Graduate Algebra I.
2018, Winter. Graduate Algebra II.
2018, Fall. Class Field Theory.
2019, Winter. Graduate Algebra II.

Miscellaneous:
Took the notes, based on a course taught by J-P. Serre at Harvard in 1989, for the book
J-P. Serre, "Topics in Galois Theory", Research Notes in Mathematics, Volume 1, Jones and
Bartlett Publishers, 1992.

Publications

References

[1] Henri Darmon and David Ford. Computational verification of M_{11} and M_{12} as Galois groups over $\mathbf{Q}$. *Comm. Algebra*, 17(12):2941–2943, 1989.

[2] Massimo Bertolini and Henri Darmon. Kolyvagin's descent and Mordell-Weil groups over ring class fields. *J. Reine Angew. Math.*, 412:63–74, 1990.

[3] Henri Darmon. Note on a polynomial of Emma Lehmer. *Math. Comp.*, 56(194):795–800, 1991.

[4] Henri Darmon and John McKay. A continued fraction and permutations with fixed points. *Amer. Math. Monthly*, 98(1):25–27, 1991.

[5] Henri Rene Darmon. *Refined class number formulas for derivatives of L-series*. ProQuest LLC, Ann Arbor, MI, 1991. Thesis (Ph.D.)–Harvard University.

[6] Henri Darmon. A refined conjecture of Mazur-Tate type for Heegner points. *Invent. Math.*, 110(1):123–146, 1992.

[7] Henri Darmon. The equations $x^n + y^n = z^2$ and $x^n + y^n = z^3$. *Internat. Math. Res. Notices*, (10):263–274, 1993.

[8] Henri Darmon. The equation $x^4 - y^4 = z^p$. *C. R. Math. Rep. Acad. Sci. Canada*, 15(6):286–290, 1993.

[9] Henri Darmon. Heegner points, Heegner cycles, and congruences. In *Elliptic curves and related topics*, volume 4 of *CRM Proc. Lecture Notes*, pages 45–59. Amer. Math. Soc., Providence, RI, 1994.

[10] Henri Darmon. Euler systems and refined conjectures of Birch Swinnerton-Dyer type. In *p-adic monodromy and the Birch and Swinnerton-Dyer conjecture (Boston, MA, 1991)*, volume 165 of *Contemp. Math.*, pages 265–276. Amer. Math. Soc., Providence, RI, 1994.

[11] Massimo Bertolini and Henri Darmon. Derived heights and generalized Mazur-Tate regulators. *Duke Math. J.*, 76(1):75–111, 1994.

[12] Henri Darmon, Fred Diamond, and Richard Taylor. Fermat's last theorem. In *Current developments in mathematics, 1995 (Cambridge, MA)*, pages 1–154. Int. Press, Cambridge, MA, 1994.

[13] Henri Darmon. Thaine's method for circular units and a conjecture of Gross. *Canad. J. Math.*, 47(2):302–317, 1995.

[14] Henri Darmon and Andrew Granville. On the equations $z^m = F(x,y)$ and $Ax^p + By^q = Cz^r$. *Bull. London Math. Soc.*, 27(6):513–543, 1995.

[15] G. Darmon. The Shimura-Taniyama conjecture (after Wiles). *Uspekhi Mat. Nauk*, 50(3(303)):33–82, 1995.

[16] Henri Darmon. Serre's conjectures. In *Seminar on Fermat's Last Theorem (Toronto, ON, 1993–1994)*, volume 17 of *CMS Conf. Proc.*, pages 135–153. Amer. Math. Soc., Providence, RI, 1995.

[17] Massimo Bertolini and Henri Darmon. Derived p-adic heights. *Amer. J. Math.*, 117(6):1517–1554, 1995.

[18] Antal Balog, Henri Darmon, and Ken Ono. Congruence for Fourier coefficients of half-integral weight modular forms and special values of L-functions. In *Analytic number theory, Vol. 1 (Allerton Park, IL, 1995)*, volume 138 of *Progr. Math.*, pages 105–128. Birkhäuser Boston, Boston, MA, 1996.

[19] M. Bertolini and H. Darmon. Heegner points on Mumford-Tate curves. *Invent. Math.*, 126(3):413–456, 1996.

[20] Henri Darmon and Loï c Merel. Winding quotients and some variants of Fermat's last theorem. *J. Reine Angew. Math.*, 490:81–100, 1997.

[21] Massimo Bertolini and Henri Darmon. A rigid analytic Gross-Zagier formula and arithmetic applications. *Ann. of Math. (2)*, 146(1):111–147, 1997. With an appendix by Bas Edixhoven.

[22] H. Darmon. Faltings plus epsilon, Wiles plus epsilon, and the generalized Fermat equation. *C. R. Math. Rep. Acad. Sci. Canada*, 19(1):3–14, 1997.

[23] H. Darmon. Corrigendum to: "Faltings plus epsilon, Wiles plus epsilon, and the generalized Fermat equation". *C. R. Math. Rep. Acad. Sci. Canada*, 19(2):64, 1997.

[24] Henri Darmon, Fred Diamond, and Richard Taylor. Fermat's last theorem. In *Elliptic curves, modular forms & Fermat's last theorem (Hong Kong, 1993)*, pages 2–140. Int. Press, Cambridge, MA, 1997.

[25] Henri Darmon. Wiles' theorem and the arithmetic of elliptic curves. In *Modular forms and Fermat's last theorem (Boston, MA, 1995)*, pages 549–569. Springer, New York, 1997.

[26] H. Darmon. Stark-Heegner points over real quadratic fields. In *Number theory (Tiruchira-palli, 1996)*, volume 210 of *Contemp. Math.*, pages 41–69. Amer. Math. Soc., Providence, RI, 1998.

[27] Massimo Bertolini and Henri Darmon. Heegner points, p-adic L-functions, and the Cerednik-Drinfeld uniformization. *Invent. Math.*, 131(3):453–491, 1998.

[28] Massimo Bertolini and Henri Darmon. Non-triviality of families of Heegner points and ranks of Selmer groups over anticyclotomic towers. *J. Ramanujan Math. Soc.*, 13(1):15–24, 1998.

[29] M. Bertolini and H. Darmon. Euler systems and Jochnowitz congruences. *Amer. J. Math.*, 121(2):259–281, 1999.

[30] Massimo Bertolini and Henri Darmon. p-adic periods, p-adic L-functions, and the p-adic uniformization of Shimura curves. *Duke Math. J.*, 98(2):305–334, 1999.

[31] Henri Darmon. Modularity of fibres in rigid local systems. *Ann. of Math. (2)*, 149(3):1079–1086, 1999.

[32] Henri Darmon. A proof of the full Shimura-Taniyama-Weil conjecture is announced. *Notices Amer. Math. Soc.*, 46(11):1397–1401, 1999.

[33] Henri Darmon. Rigid local systems, Hilbert modular forms, and Fermat's last theorem. *Duke Math. J.*, 102(3):413–449, 2000.

[34] Henri Darmon. La conjecture de Shimura-Taniyama-Weil est enfin démontrée. *Gaz. Math.*, (83):48–56, 2000. English original appeared in [Notices Amer. Math. Soc. **46** (1999), no. 11, 1397–1401; MR1723249 (2000j:11082)].

[35] Henri Darmon and Jean-François Mestre. Courbes hyperelliptiques à multiplications réelles et une construction de Shih. *Canad. Math. Bull.*, 43(3):304–311, 2000.

[36] Massimo Bertolini and Henri Darmon. The p-adic L-functions of modular elliptic curves. In *Mathematics unlimited—2001 and beyond*, pages 109–170. Springer, Berlin, 2001.

[37] Henri Darmon. Integration on $\mathcal{H}_\surd \times \mathcal{H}$ and arithmetic applications. *Ann. of Math. (2)*, 154(3):589–639, 2001.

[38] Massimo Bertolini, Henri Darmon, Adrian Iovita, and Michael Spiess. Teitelbaum's exceptional zero conjecture in the anticyclotomic setting. *Amer. J. Math.*, 124(2):411–449, 2002.

[39] Henri Darmon and Peter Green. Elliptic curves and class fields of real quadratic fields: algorithms and evidence. *Experiment. Math.*, 11(1):37–55, 2002.

[40] Henri Darmon and Claude Levesque. Infinite sums, Diophantine equations and Fermat's last theorem. In *Number theoretic methods (Iizuka, 2001)*, volume 8 of *Dev. Math.*, pages 73–95. Kluwer Acad. Publ., Dordrecht, 2002.

[41] Henri Darmon and Adam Logan. Periods of Hilbert modular forms and rational points on elliptic curves. *Int. Math. Res. Not.*, (40):2153–2180, 2003.

[42] Henri Darmon and Adam Logan. Heegner points and Hilbert modular forms. *Sūrikaisekikenkyūsho Kōkyūroku*, (1324):153–160, 2003. Algebraic number theory and related topics (Japanese) (Kyoto, 2002).

[43] Henri Darmon. *Rational points on modular elliptic curves*, volume 101 of *CBMS Regional Conference Series in Mathematics*. Published for the Conference Board of the Mathematical Sciences, Washington, DC; by the American Mathematical Society, Providence, RI, 2004.

[44] Massimo Bertolini and Henri Darmon. A Birch and Swinnerton-Dyer conjecture for the Mazur-Tate circle pairing. *Duke Math. J.*, 122(1):181–204, 2004.

[45] Henri Darmon. A fourteenth lecture on Fermat's last theorem. In *Number theory*, volume 36 of *CRM Proc. Lecture Notes*, pages 103–115. Amer. Math. Soc., Providence, RI, 2004.

[46] Henri Darmon. Heegner points and elliptic curves of large rank over function fields. In *Heegner points and Rankin L-series*, volume 49 of *Math. Sci. Res. Inst. Publ.*, pages 317–322. Cambridge Univ. Press, Cambridge, 2004.

[47] Massimo Bertolini, Henri Darmon, and Peter Green. Periods and points attached to quadratic algebras. In *Heegner points and Rankin L-series*, volume 49 of *Math. Sci. Res. Inst. Publ.*, pages 323–367. Cambridge Univ. Press, Cambridge, 2004.

[48] Henri Darmon and Samit Dasgupta. Unités elliptiques, corps quadratiques réels, et une formule limite de Kronecker. *Ann. Sci. Math. Québec*, 28(1-2):77–88 (2005), 2004.

[49] M. Bertolini and H. Darmon. Iwasawa's main conjecture for elliptic curves over anticyclotomic $\mathbf{Z_p}$-extensions. *Ann. of Math. (2)*, 162(1):1–64, 2005.

[50] Henri Darmon and Samit Dasgupta. Elliptic units for real quadratic fields. *Ann. of Math. (2)*, 163(1):301–346, 2006.

[51] Henri Darmon and Robert Pollack. Efficient calculation of Stark-Heegner points via overconvergent modular symbols. *Israel J. Math.*, 153:319–354, 2006.

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