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Personal

Born on June 15, 1991.

French citizen, married, one child.

Education

(2021-2022) Member at the Institute for Advanced Studies (Princeton).

(2018-Now) Assistant professor (tenure track) at the Yau Mathematical Sciences Center (center affiliated with Tsinghua University, Beijing).

(2015-2018) Ph.D. Mathematics, Université Paris-Diderot (Paris VII), under the supervision of Prof. Loïc Merel. Title: "Éléments d'Eisenstein supérieurs". Referees: Henri Darmon and Akshay Venkatesh.

(2013-2014) M.A. Mathematics, Université Pierre et Marie Curie (Paris VI). Master thesis done under the supervision of Prof. Kevin Buzzard at Imperial College in London (September 2013-February 2014).

(2011-2012) B.S. Mathematics, École Normale Supérieure (ENS).

Publications

1. Higher Eisenstein elements, higher Eichler formulas and ranks of Hecke algebras. To appear in *Inventiones Mathematicae*, DOI: [10.1007/s00222-020-00996-1](https://doi.org/10.1007/s00222-020-00996-1).
2. Mixed modular symbols and the generalized cuspidal 1-motive. To appear in *Transactions of the American Mathematical Society*, DOI: [10.1090/tran/8310](https://doi.org/10.1090/tran/8310).
3. (With Jun Wang) On a conjecture of Sharifi and Mazur's Eisenstein ideal. To appear in *International Mathematics Research Notices*, DOI: [10.1093/imrn/rnaa115](https://doi.org/10.1093/imrn/rnaa115).
4. (With Adel Betina) On the p -adic periods of the modular curve $X(\Gamma_0(p) \cap \Gamma(2))$. *Transactions of the American Mathematical Society*, Volume 371, Number 1, 1 January 2019, Pages 413-429.
5. On the Galois structure of the class group of certain Kummer extensions. *Journal of the London Mathematical Society*, Volume 98, Issue 1, August 2018
6. (With Adel Betina) Congruence formulas for Legendre modular polynomials. *Journal of Number Theory*, Volume 188, July 2018, Pages 71-87
7. (With David Zmiaikou) On a conjecture of H. Gupta. *Discrete Mathematics*, Volume 312, Issue 8, April 2012, Pages 1444-1452

Prepublications

1. On the Mazur–Tate conjecture for prime conductor and Mazur’s Eisenstein ideal. (17 pages, October 2019, submitted)
Available at <https://arxiv.org/abs/1910.03792>.

Teaching experience

Spring 2020, Advanced calculus (instructor), Tsinghua University.

Fall 2019, Graduate course on “Modular symbols and their applications”, Yau Mathematical Sciences Center.

Spring 2019, Advanced calculus (instructor), Tsinghua University.

August 2017, Teaching assistant for Jack Thorne’s modularity course, 15 hours, ICTP summer school, Trieste, Italy.

2015-2018, Teaching for first/second year university students, 64 hours a year, Université Paris-Diderot.

2014-2015 Oral exams, 64 hours, Lycée Henri IV, Paris.

Since 2010, Supervision of teams for the International Tournament of Young Mathematicians.

Summer 2009, 2010, 2011, Teaching at the national summer school for high school students, Brigantina, Belarus.

Since 2009, Training sessions (4 hours each) for mathematical olympiads, Orsay/Parimaths clubs.

Academic activities

Organizer (together with Preston Wake and Wan Xin) of a conference on Iwasawa theory and Eisenstein ideals at the Morningside Center for Mathematics (Beijing, 17-22 June 2019).

Referee for papers in the following journal: Journal of the EMS, Advances in Mathematics, Research in Number theory, Journal of Number Theory, Transactions of the AMS.