

Gautier Ponsinet

Curriculum Vitae

Institut de Mathématiques de Bordeaux
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Citizenship: French
Date of birth: January 1991

Updated on 20th March 2022.

Education & Employment

- Mar. 2022 – **Postdoctoral Fellow**, *University of Bordeaux*, France, under the supervision of Prof. Denis Benois
Dec. 2022 As part of the GALF Project (ANR-18-CE40-0029 & FNR) “Galois representations, automorphic forms and their L -functions”.
- Mar. 2021 – **Postdoctoral Fellow**, *University of Genoa*, Italy, under the supervision of Prof. Stefano Vigni
Feb. 2022 Grant “Ing. Giorgio Schirillo” from the Istituto Nazionale di Alta Matematica Francesco Severi.
- Sept. 2020 – **Postdoctoral Fellow**, *Centre de Recherches Mathématiques*, Montréal, Canada,
Dec. 2020 Special semester “Number theory - Cohomology in arithmetic”
Due to the corona-virus epidemic, I was not able to go to Montréal but I followed and participated to the semester online.
- Sept. 2018 – **Postdoctoral Fellow**, *Max Planck Institute*, Bonn, Germany
Dec. 2020
- 2014–2018 **Ph.D. in Mathematics**, *Laval University*, Québec, Canada, under the supervision of Prof. Antonio Lei
- 2011–2014 **Master of Mathematics**, *Université Pierre et Marie Curie*, Paris, France
Master thesis under the supervision of Prof. Olivier Fouquet.
- 2011 **Bachelor of Mathematics**, *Université de Versailles Saint-Quentin-en-Yvelines*, Versailles, France
Bachelor of Computer science, *Université de Versailles Saint-Quentin-en-Yvelines*, Versailles, France
Double university curriculum Mathematics–Computer Science

Articles

Submitted:

6. **On Shafarevich–Tate groups and analytic ranks in families of modular forms, II. Coleman families**, with Maria Rosaria Pati and Stefano Vigni, arXiv:2112.11847
5. **Universal norms and the Fargues-Fontaine curve**, arXiv:2010.02292
Videos of talks about it:
<https://youtu.be/eRp8nMLLsca> (1h),
<https://youtu.be/-fAIVQe5jqo> (20min).

4. **On the Iwasawa invariants of Kato's zeta elements for modular forms**, with Chan-Ho Kim and Jaehoon Lee, arXiv:1909.01764
Published:
3. **On the Mordell-Weil ranks of supersingular abelian varieties in cyclotomic extensions**, with Antonio Lei, Proceedings of the American Mathematical Society, Ser. B, Vol. 7, 2020. journal (DOI: 10.1090/bproc/43), arXiv:1807.07604
2. **On the structure of signed Selmer groups**, Mathematische Zeitschrift, Vol. 294, Issue 3-4, April 2020. journal (DOI: 10.1007/s00209-019-02328-3), arXiv:1807.07607
1. **Functional equations for multi-signed Selmer groups**, with Antonio Lei, Annales mathématiques du Québec, Vol. 41, Issue 1, April 2017. journal (DOI: 10.1007/s40316-016-0063-9), arXiv:1601.04999

Invited talks and lectures

Conferences and Workshops:

- Mar. 2021 **Number theory online**, Italy, organised by A. Bandini, A. Gambini and A. Zaccagnini, online
<https://www.numbertheoryonline.org/>
- Sept. 2020 **Maine-Québec number theory conference**, Laval University, Québec, Canada, online
Video available on YouTube: <https://youtu.be/-fAIVQe5jqo>
- July 2018 **Canadian Number Theory Association Conference**, Laval University, Québec, Canada
- Oct. 2017 **Maine-Québec number theory conference**, University of Maine, Orono, USA
- Dec. 2015 **Canadian Mathematical Society Winter meeting**, Montréal, Canada
- Oct. 2015 **Maine-Québec number theory conference**, University of Maine, Orono, USA

Seminars:

- Feb. 2022 **Webinar in Number Theory France-South Korea**, organised by Profs. YoungJu Choie (POSTECH), Bo-Hae Im (KAIST), Laurent Berger (ENS Lyon), online
- Feb. 2021 **Number theory seminar**, Université de Bordeaux, France, online
- Jan. 2021 **Number theory seminar**, Arizona State University, USA, online
- Dec. 2020 **Oberseminar Arithmetische und Algebraische Geometrie**, Ludwig-Maximilians-Universität München, Munich, Germany, organised by Profs. W. Bley, C. Greither, C. Liedtke and A. Rosenschon, online
- Dec. 2020 **Seminar on Algebra, Geometry and Physics**, Max Planck Institute, Bonn, Germany, organised by Profs. Yuri Manin and Gaetan Borot, online
- Oct. 2020 **Luxembourg Number Theory Seminar**, Université du Luxembourg, online
- June 2020 **CRM-CICMA Québec-Vermont Number Theory Seminar**, Montréal, Canada, online
Video available on YouTube: <https://youtu.be/eRp8nMLLsCA>
- Jan. 2020 **Symmetry, Geometry, and Arithmetic Seminar**, Universität Heidelberg, Germany
- Dec. 2019 **Number Theory Seminar**, University of Copenhagen, Denmark
- Oct. 2019 **Algebra and Number Theory Seminar**, University College Dublin, Ireland

Nov. 2018 **Seminar on Algebra, Geometry and Physics**, *Max Planck Institute*, Bonn, Germany, organised by Prof. Yuri Manin

Other:

Sept. 2019 **Mini Lecture Series (4h) “Universal norms and control theorems in Iwasawa theory”**, *Korea Institute for Advanced Studies*, Seoul, South Korea

Invited academic visits

Oct. 2019 **University College Dublin**, Ireland, invited by Prof. Kâzım Büyükboduk (1 week)

Sept. 2019 **Korea Institute for Advanced Studies**, Seoul, South Korea, invited by Chan-Ho Kim (12 days)

Reviewer

Journals for which I reviewed articles:

- **Annales mathématiques du Québec**
- **Journal de théorie des nombres de Bordeaux**
- **Journal of Number Theory**
- **Proceedings of the American Mathematical Society**
- **Transactions of the American Mathematical Society**

I also write reviews for:

- **MathSciNet**

Teaching

2016–2017 **Advanced linear algebra**, *teaching assistant*, Laval University, Québec, Canada

2016–2017 **Introduction to linear algebra**, *teaching assistant*, Laval University, Québec, Canada

2015–2016 **Introduction to linear algebra**, *teaching assistant*, Laval University, Québec, Canada

2014–2015 **Algebra II**, *teaching assistant*, Laval University, Québec, Canada

Languages

- **French**, *native language*
- **English**, *fluent*