Curriculum Vitae

May 13, 2021

Personal Informations

⋄ Emiliano Ambrosi, Italian, 31/01/1992, Milan;

⋄ Mail: emilianomaria.ambrosi@gmail.com;

⋄ Web page: `http://emiliano.ambrosi.perso.math.cnrs.fr`.

⋄ Office 207, IRMA, 7 rue René Descartes, , 67084 Strasbourg (France).

Employment

2020-	Maître de conférence à l'Institut de Recherche Mathématique Avancée (IRMA), Strasbourg;
2019-2020	Post-doc at Max Planck Institute for Mathematics (MPIM), Bonn.

Education

2016-2019	Ph.D. in Mathematics, École Polytechnique, Paris;
2015–2016	Erasmus, University of Paris Sud, Master 2 'Analyse, Arithmétique et Géométrie', Orsay, France;
2014–2016	Master in Mathematics, University of Milan, Italy, *110/110 cum laude*;
2013–2014	Electronic Music Composition, Scuola Civica di Musica, Milan, Italy;
2011–2013	Music Composition, Scuola Civica di Musica, Milan, Italy;
2011–2014	Bachelor in Mathematics, University of Milan, Italy.

Theses

⋄ Ph.D. Thesis: ℓ-adic, p-adic and geometric invariants in families of varieties; defended on 18/06/2019 in front of Hélène Esnault (president), Yves André (referee), Anna Cadoret (advisor), François Charles, Javier Fresán, Moritz Kerz (referee);

⋄ Master Thesis: The Tate conjectures for abelian varieties after Tate, Zarhin, Mori, Faltings, under the supervision of Anna Cadoret and Fabrizio Andreatta;

⋄ Bachelor Thesis: Galois theory of Grothendieck, under the supervision of Fabrizio Andreatta.

Publications

◇ *Specialization of Néron-Severi groups in positive characteristic*, to appear in Annales scientifiques de l'École normale supérieure.

◇ *Uniform boundedness of Brauer groups of forms in positive characteristic*, Mathematical Research Letters, Vol. 28, No. 2, pp. 315–329, 2021.

◇ *A note on the behaviour of the Tate conjecture under finitely generated field extensions*, Pure and Applied Mathematics Quarterly, Vol. 14, No. 3-4, pp. 515-527, 2018.

Preprints

◇ *Perfect points of abelian varieties*, preprint available at `http://emiliano.ambrosi.perso.math.cnrs.fr/papers.html` ;

◇ *Maximal tori of monodromy groups of F-isocrystals and applications*, joint with Marco D'addezio, preprint available at `http://emiliano.ambrosi.perso.math.cnrs.fr/papers.html`;

◇ *A uniform open image theorem for ℓ-adic representations in positive characteristic*, preprint available at `http://emiliano.ambrosi.perso.math.cnrs.fr/papers.html`.

Visiting

◇ University of Tokyo, Host professor: A.Shiho, 25 March - 5 April 2019;

◇ RIMS (Kyoto), Host professor: A.Tamagawa, 14 August - 8 September 2018;

◇ RIMS (Kyoto), Host professor: A.Tamagawa, 20 August - 2 September 2017;

◇ IMPU (Tokyo), Host professor: T.Abe, 5-19 August, 2017.

Mini courses

◇ p-adic cohomology theories with a view toward ℓ-adic applications, Number Theory/Arithmetic Geometry Seminars, Kyoto (RIMS), 24,28 August and 1 September, 2017, 9 hours.

Teaching experiences

Courses

◇ 2020-2021:

    – Mathématiques élémentaires S1 (26 hours, cours intégrés);

    – Algèbre S1 (35 hours, cours intégrés);

    – Algèbre S4 (20 hours, cours magistraux).

These supervised

◇ 2020-2021:

  – Sum of squares (Gless Timothée, Mémoire agrégation);
  – An algebraic proof of the finiteness of the class number (Moreau Théophile, Mémoire L3).

◇ Sum of squares (Gless Timothée, Mémoire agrégation);

◇ An algebraic proof of the finiteness of the class number (Moreau Théophile, Mémoire L3).

Community service

◇ Reviewing:

  – Zbmath (since April 2021).

◇ Refereeing:

  – Internation Journal of Number Theory (since April 2021).

As speaker in Seminars and Conferences

◇ Perfect points of abelian varieties, Séminaire de géométrie arithmétique, Rennes, 1 April 2021;

◇ Perfect points of abelian varieties, Séminaire d'arithmétique, Lyon, 25 February 2021;

◇ Perfect points of abelian varieties, Séminaire de théorie des nombres de l'IMJ-PRG, Paris, 19 Octobre 2020;

◇ Perfect points of abelian varieties, Séminaire 'Arithmétique et géométrie algébrique', IRMA, Strasbourg, 17 September 2020;

◇ Perfect points of abelian varieties, Seminar on Algebra, Geometry and Physics, Bonn (MPIM), 7 July, 2020;

◇ Torsion points of abelian varieties and F-isocrystals, Mittagsseminar zur Arithmetik, Münster, 12 November, 2019;

◇ Geometry and arithmetic in families of varieties, Oberseminar, Bonn (MPIM), 24 October, 2019;

◇ Torsion points of abelian varieties and F-isocrystals, Arithmetic of connections, Monte Veritá, 18 July, 2019;

◇ Specialization of arithmetic and cohomological invariants in positive characteristic, Séminaires Math Jeunes, Paris, 9 Mars, 2019;

◇ p-torsion of abelian varieties and monodromy groups of (over)convergent F-isocrystals, Séminaires de Géométrie Arithmétique et Motivique, Paris 13, 22 February 2019;

- ⬦ Uniform bound of Brauer groups of forms in positive characteristic, Séminaires Variétés rationnelles, Paris, 25 January 2019;

- ⬦ Specialization of Néron-Severi groups in positive characteristic, Séminaire 'Arithmétique et géométrie algébrique', IRMA, Strasbourg, 17 January 2019;

- ⬦ Monodromy groups of convergent isocrystals and applications, p-adic cohomology and arithmetic geometry, Sendai, 5-9 November 2018;

- ⬦ An explicit bound for the ℓ-primary torsion in one dimensional families of abelian varieties in positive characteristic, Explicit and computational approaches to Galois representations, Luxembourg, 3-7 July 2018;

- ⬦ Specialization of Néron-Severi groups in positive characteristic, Guest seminar 'Arithmetic Geometry', Berlin, 28 June, 2018;

- ⬦ Specialization of Néron-Severi groups in positive characteristic, Séminaire Autour des cycles algébriques, Paris, 16 May, 2018;

- ⬦ Specialization of Néron-Severi groups in positive characteristic, Workshop K3 surfaces and Galois representations, Shepperton, 2-4 May, 2018;

- ⬦ Specialization of representations of the étale fundamental group and applications, Seminar Réga, Paris, 7 November, 2017;

- ⬦ Specialization of representations of the étale fundamental group and specialization of cohomological cycles, short talk (15 minutes), Where geometry meets number theory, Gothenburg, 17 July, 2017;

- ⬦ Monodromy groups and specializations of cohomological cycles, Doctoral seminars, Milan, 29 May, 2017;

- ⬦ Uniform boundedness of l-primary torsion of Brauer group in one dimensional families, Working group on K3 surfaces, London (Imperial college), 14 February, 2017;

- ⬦ Specialization of representations of the étale fundamental group and applications, Junior Number Theory Seminar, London (UCL), 13 February, 2017.

Conferences attended

- ⬦ *1st JNT Biennial Conference*, Cetraro, 22-26 July, 2019;

- ⬦ *Arithmetic of Connections*, Monte Veritá, 15-19 July, 2019;

- ⬦ *Arithmetic Geometry: ℓ-adic and p-adic aspects*, Tokyo, 10-14 September, 2018;

- ⬦ *Arithmetic and Algebraic Geometry*, Bures-sur-Yvette, 11-15 June, 2018;

- ⬦ *Summer School: Explicit and computational approaches to Galois representations*, Luxembourg, 3-7 July 2018;

- ⬦ *K3 surfaces and Galois representations*, Shepperton, 2-4 May, 2018;

- ⋄ *Crystals and geometry*, Munich, 4-6 April, 2018;

- ⋄ *Winter school: Riemann-Hilbert correspondences*, Padova, 29 January - 2 February, 2018;

- ⋄ *Conference on Algebraic Geometry and Number Theory on the occasion of Jean-Louis Colliot-Thélène's 70th birthday*, Firenze, 4-6 December, 2017;

- ⋄ *Abelian varieties and Galois actions*, Poznan, 25-27 July, 2017;

- ⋄ *Where geometry meets number theory*, Gothenburg, 17-19 July, 2017;

- ⋄ *Arizona Summer school: Perfectoid spaces*, Tucson, 11-15 March, 2017;

- ⋄ *3rd Workshop on Interactions between Arithmetic and Homotopy*, London, 14-16 February, 2017;

- ⋄ *London-Paris Number Theory Seminars on Perfectoid spaces*, Paris, 14-15 November, 2016;

- ⋄ *Summer school: Fundamental groups in arithmetic geometry*, Paris, 27 May - 3 June , 2016;

- ⋄ *Séminaire Grothendieck 2015* , Paris, 30 March, 2016;

- ⋄ *Summer school on Derived algebraic geometry*, Pavia, 14-18 September , 2015;

- ⋄ *Summer school on Perfectoid Spaces*, Bressanone, 31 August - 5 September, 2015;

- ⋄ *A categorical day in Turin*, Turin, 14 April, 2015;

- ⋄ *Séminaire Grothendieck 2015* , Milan, 23 March, 2015.

Working groups

- ⋄ Relévements modulo p^2 et décomposition du complexe de de-Rham (Fall 2020, online, organizer);

- ⋄ Smooth and proper schemes over $\mathbb{Z}$ (Fall 2020);

- ⋄ Prismatic Dieudonné Theory (Fall 2019);

- ⋄ Canonical and integral models of Shimura varieties (Fall 2017), organizer;

- ⋄ Lisse sheaves and isocrystals: finiteness and companions (Spring 2017);

- ⋄ Kuga-Satake construction and the Weil conjectures for K3 surfaces (Spring 2017), organizer;

- ⋄ Honda-Tate theory (Fall 2016);

- ⋄ Algebraic groups (Fall 2016);

- ⋄ Resolution of singularities (Spring 2016);

- ⋄ Brauer Manin Obstruction and Colliot-Thélène Sansuc descent theory (Fall 2015);

- ⋄ A first glance at Stacks Theory (Spring 2015).

Grants

- ⋄ Max Planck Institute for Mathematics Postdoctoral Fellowship (October 2019 - September 2021)

- ⋄ EDMH Fellowship with Monge Hat (October 2016 - September 2019).

Miscellaneous

- ⋄ An Algebraic geometry view on classical number theory;

- ⋄ Activities of Math tutor for student of High school and first years of Bachelor;

- ⋄ Computer skills: Word, C, Latex, Mathlab.

Languages

- ⋄ Italian: Mother tongue;

- ⋄ English: Fluent;

- ⋄ French: Fluent.