

Marco D'Addezio

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Born: January 07, 1992—Rome, Italy

Nationality: Italian

Current position

2021- Postdoctoral Fellow, Institut de Mathématiques de Jussieu–Paris Rive Gauche, Paris;
Mentor: Dr. Matthew Morrow.

Previous positions

2019-2021 Postdoctoral Fellow, Max Planck Institute for Mathematics, Bonn, Germany; Men-
tor: Prof. Peter Scholze.

2019 Postdoctoral Fellow, Free University Berlin, Germany; Mentor: Dr. Simon Pepin
Lehalleur.

Areas of specialization

Algebraic Geometry, Number Theory.

Education

2016-2019 Ph.D. in Mathematics, Free University Berlin, Germany; Supervisors: Prof. Hélène
Esnault and Prof. Vasudevan Srinivas; Thesis title: *Monodromy groups in positive
characteristic*.

2015-2016 Master 2 - Analyse, Arithmétique et Géométrie, University Paris Sud, France.

- 2014-2015 Master 1 - Mathématiques Fondamentales et Appliquées, University Paris Sud, France.
- 2011-2014 Bachelor in Mathematics, University of Pisa, Italy.

Grants & awards

- 2021- German Research Foundation Postdoctoral Fellowship.
 2020 Ernst Reuter Prize for the PhD thesis.
- 2019-2021 Max Planck Institute for Mathematics Postdoctoral Fellowship.
 2019 German Research Foundation Postdoctoral Fellowship.
- 2016-2019 Einstein Foundation Fellowship.
 2014-2016 Paris Saclay Scholarship.
 2011-2014 Istituto Nazionale di Alta Matematica Scholarship.

Articles & talks

ACCEPTED ARTICLES

- 2021 M. D'Addezio, H. Esnault, *On the universal extensions in Tannakian categories*, [arXiv:2009.14170](https://arxiv.org/abs/2009.14170), to appear in Int. Math. Res. Not.
- 2021 M. D'Addezio, *On the semi-simplicity conjecture for \mathbb{Q}^{ab}* , [arXiv:1805.11071](https://arxiv.org/abs/1805.11071), to appear in Math. Res. Lett.
- 2020 M. D'Addezio, *The monodromy groups of lisse sheaves and overconvergent F -isocrystals*, *Sel. Math. (New Ser.)* **26** (2020).

PREPRINTS

- 2022 M. D'Addezio, *Boundedness of the p -primary torsion of the Brauer group of an abelian variety*, <https://arxiv.org/abs/2201.07526>.
- 2021 M. D'Addezio, *Slopes of F -isocrystals over abelian varieties*, <https://arxiv.org/abs/2101.06257> (submitted).
- 2020 M. D'Addezio, *Parabolicity conjecture of F -isocrystals*, [arXiv:2012.12879](https://arxiv.org/abs/2012.12879) (submitted).
- 2020 M. D'Addezio, *Some remarks on the companions conjecture for normal varieties*, [arXiv:2006.09954](https://arxiv.org/abs/2006.09954) (submitted).
- 2018 E. Ambrosi and M. D'Addezio, *Maximal tori of monodromy groups of F -isocrystals*

and an application to abelian varieties, [arXiv:1811.08423](https://arxiv.org/abs/1811.08423) (submitted).

PHD THESIS

- 2019 M. D'Addezio, *Monodromy groups in positive characteristic*, Free University Berlin, <https://refubium.fu-berlin.de/handle/fub188/25014>. [awarded Ernst-Reuter Prize]

INVITED TALKS

- 2021 *Parabolicity conjecture of F -isocrystals and torsion points of abelian varieties*, London-Paris Number Theory Seminar, Paris 13, France.
- 2021 *Monodromy of F -isocrystals and algebraic cycles* (webinar), Paris 13, France.
- 2021 *Torsion points of abelian varieties and F -isocrystals* (webinar), Tata Institute of Fundamental Research, Mumbai, India.
- 2021 *Parabolicity conjecture of F -isocrystals* (webinar), Paris 6, France.
- 2020 *Parabolicity conjecture of F -isocrystals* (webinar), The Chinese University of Hong Kong.
- 2020 *Monodromy groups of F -isocrystals* (webinar), Purdue University, United States.
- 2019 *Parabolicity conjecture of F -isocrystals*, Free University Berlin, Germany.
- 2019 *Torsion points of abelian varieties and F -isocrystals*, SPP 1786 Jahrestagung, University of Duisburg–Essen, Germany.
- 2019 *Slope filtration and monodromy groups of F -isocrystals*, conference “Algebraic and p -adic fundamental groups”, University of Caen Normandy, France.
- 2019 *Torsion points of abelian varieties and F -isocrystals*, summer school “Arithmetic of connections”, Ascona, Switzerland.
- 2019 *Torsion points of abelian varieties and F -isocrystals*, University of Regensburg, Germany.
- 2019 *Torsion points of abelian varieties and F -isocrystals*, University of Rome Tor Vergata, Italy.
- 2019 *Finiteness of perfect torsion points of an abelian variety and F -isocrystals*, seminar “Autour des cycles algébriques”, Paris 6, France.
- 2018 *Finiteness of perfect torsion points of an abelian variety and F -isocrystals*, Humboldt University of Berlin, Germany.
- 2018 *Finiteness of perfect torsion points of an abelian variety*, conference “Arithmetic Geometry and de Rham Theory”, Institute of Mathematics-VAST, Hanoi, Vietnam.
- 2018 *Finiteness of perfect torsion points of an abelian variety and F -isocrystals*, Mathematical Institute of the University of Bonn, Germany.
- 2018 *Slopes of F -isocrystals on abelian varieties*, workshop “ F -isocrystals and families of algebraic varieties”, IMPAN, Warsaw, Poland.

- 2018 *On the semi-simplicity conjecture for \mathbb{Q}^{ab}* , North German Algebraic Geometry Seminar 2018, Max Planck Institute for Mathematics in Sciences, Leipzig, Germany.
- 2018 *Finiteness of perfect torsion points of an abelian variety*, University of Freiburg, Germany.
- 2018 *Finiteness of perfect torsion points of an abelian variety*, University of Amsterdam, Netherlands.
- 2018 *Monodromy groups of F -isocrystals*, workshop “Riemann-Hilbert correspondences”, University of Padua, Italy.
- 2017 *Survey on Deligne conjectures for lisse sheaves*, London Junior Number Theory Seminar, University College London, England.
- 2017 *Independence of monodromy groups*, conference “Fundamental Groups in Arithmetic Geometry”, Tuan Chau, Vietnam.

EXTENDED RESEARCH VISITS

- 2018 University of Freiburg, one week; invited by Dr. Johannes Commelin.
- 2018 University of Chicago, one week; invited by Prof. Vladimir Drinfeld.

TALKS AT THE DEPARTMENT

- 2022 *Finiteness of the p -primary torsion of the Brauer group of an abelian variety*, Jussieu, France.
- 2020 *Torsion points of abelian varieties and F -isocrystals* (webinar), MPIM, Bonn, Germany.
- 2019 *Minimal slope and parabolicity conjecture of F -isocrystals*, University of Bonn, Germany.
- 2018 *Finiteness of perfect torsion points of an abelian variety*, Free University Berlin, Germany.
- 2017 *Three lectures on lisse sheaves and overconvergent isocrystals*, Free University Berlin, Germany.

Seminars and other activities

SEMINARS ORGANIZED

- 2018 *Student seminar on Abhyankar’s conjectures* (co-organized with Marcin Lara), Free University Berlin, Germany.
- 2017 *Algebraic Geometry and Number Theory Seminar*, Free University Berlin, Germany.
- 2017 *Research seminar on the Langlands correspondence for function fields* (co-organized with Michael Gröchenig and Raju Krishnamoorthy), Free University Berlin, Germany.

- 2015 *Seminar on Brauer Manin Obstruction and Colliot-Thélène Sansuc descent theory* (co-organized with Emiliano Ambrosi, Gregorio Baldi and Marcin Lara), University Paris Sud, France.
- 2015 *Séminaire d'Arithmétique et de Géométrie Algébrique jeune*, University Paris Sud, France.

SEMINARS ATTENDED

- 2021- *Séminaire de théorie des nombres de l'IMJ-PRG*, Jussieu, Paris.
- 2021- *Arithmetic Geometry Preprint Seminar*, Jussieu, Paris.
- 2019-2021 *Arithmetische Geometrie-Arbeitsgemeinschaft*, University of Bonn.
- 2019 *Arithmetische Geometrie-Oberseminar: Prismatic Dieudonné theory*, University of Bonn.
- 2016-2019 *Guest seminar "Arithmetic Geometry"*, FU Berlin.
- 2018 *A New Proof of Mordell Conjecture*, FU Berlin.
- 2018 *Integral p -adic Hodge Theory*, FU Berlin.
- 2018 *De Rham epsilon factors à la Beilinson-Bloch-Esnault*, FU Berlin.
- 2017 *p -adic Simpson correspondence*, FU Berlin.
- 2017 *Formal geometry and deformation theory*, FU Berlin.
- 2017 *p -adic Hodge theory*, FU Berlin.
- 2017 *Faisceaux lisses et isocristaux*, Paris, France.
- 2016 *Berkovich spaces, birational geometry and motivic zeta functions*, FU Berlin.
- 2016 *Crystalline cohomology*, FU Berlin.
- 2016 *Motivic Galois groups and periods*, FU Berlin.
- 2016 *D -modules*, FU Berlin.

MASTER STUDENTS SUPERVISED

- 2020-2021 Sjoerd Wijnand De Vries, University of Bonn, Germany.

CONFERENCES & SCHOOLS

- 2019 *Over and around sites in characteristic p , in honor of Bernard Le Stum*, Padua, Italy.
- 2019 *Periods and Motives*, Berlin, Germany.
- 2019 *Arithmetic Geometry in Carthage*, Carthage, Tunisia.
- 2019 *Geometry and Arithmetic of Algebraic Varieties*, Bonn, Germany.
- 2019 *Workshop on Prismatic Cohomology*, Essen, Germany.
- 2019 *Women in Homotopy Theory and Algebraic Geometry II*, Berlin, Germany.
- 2019 *Arizona Winter School 2019: Topology and Arithmetic*, Tucson, Arizona.
- 2018 *Hodge theory of character varieties and the $P = W$ conjecture*, Tatihou Island,

- France.
- 2018 *Arithmetic and Algebraic Geometry - a conference in honor of Ofer Gabber*, Paris, France.
- 2018 *Crystals and Geometry in Characteristic p* , Munich, Germany.
- 2018 *Arizona Winter School 2018: Iwasawa Theory*, Tucson, Arizona.
- 2018 *Riemann-Hilbert correspondences*, Padua, Italy.
- 2017 *Period mappings from complex to p -adic*, Tatihou Island, France.
- 2017 *Curves and L -functions*, Trieste, Italy.
- 2017 *Motives for periods*, Berlin, Germany.
- 2017 *Abelian Varieties and Galois Actions*, Poznań, Poland.
- 2017 *Where Geometry meets Number Theory*, Göteborg, Sweden.
- 2017 *London-Paris Number Theory Seminar*, London, England.
- 2017 *Arizona Winter School 2017: Perfectoid Spaces*, Tucson, Arizona.
- 2016 *Motives and complex multiplication*, Ascona, Switzerland.
- 2016 *Satellite conference of γ ECM*, Hannover, Germany.
- 2016 *Shimura varieties*, Leiden, Netherlands.
- 2016 *Arakelov theory and automorphic forms*, Berlin, Germany.
- 2016 *Fundamental groups in arithmetic geometry*, Paris, France.
- 2016 *Day of algebraic and arithmetic geometry*, Berlin, Germany.
- 2016 *Séminaire Grothendieck*, Paris, France.
- 2016 *Algebraic geometry - a conference in honour of Arthur Ogus*, Paris, France.
- 2015 *Geometry of algebraic varieties*, Berlin, Germany.
- 2015 *Moduli spaces and automorphic forms*, Siena, Italy.
- 2015 *Topological K -theory and applications*, Strasbourg, France.

Languages

Italian : First language.

English : Fluent.

French : Fluent.

German : Basic.