Nicola Mazzari

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Academic Position

Since 03/2020	**Ricercatore di tipo B**, *Università degli Studi di Padova*, Dipartimento di Matematica.
2012-2020	**Maître de Conférences**, *Université de Bordeaux*, France.

Studies

14/07/05	**Laurea Magistrale con lode**, *Università di Padova*.
	Mémoire : *Shimura curves, Moduli problems and Quaternionic Abelian Surfaces*
	Advisor : Fabrizio Andreatta
01/01/2006	**Ph.D**, *Università Statale degli Studi di Milano*.
13/03/2009	Thesis : *Formal Hodge Structures*
	Advisor : Luca Barbieri-Viale
01/07/2007	**Early Stage Researcher**, *Max Planck Institute for Mathematics*, Bonn.
31/01/2008	
26/11/2008	**Guest**, *Université de Duisburg-Essen*.
23/12/2012	Invited by Hélene Esnault
01/03/2009	**Post-Doc**, *Università di Padova*, (Borsista), Rappresentazioni e Motivi.
31/08/2009	Under the supervision of Bruno Chiarellotto
01/12/2009	**Post-Doc**, *Università di Padova*, (Borsista), Eccellenza Cariparo.
31/12/2010	Under the supervision of Bruno Chiarellotto
01/03/2011	**Post-Doc**, *Università di Padova*, (Assegnista), Algebraic Analysis and Geometry.
30/09/2011	Under the supervision of Andrea D'Agnolo
01/10/2011	**Post-Doc**, *Paris 7 (IMJ)*, Fondazione Cino del Duca.
31/08/2012	Under the supervision of Michael Harris

Publications

- **Cohomological dimension of Laumon 1-motives up to isogenies**, *by N. Mazzari*, Journal de Théorie des Nombres de Bordeaux, no. 22, 719–726, 2010.
  DOI: 10.5802/jtnb.741 ; MR: 2769340 ; hal-00772053v1

- **Extensions of Formal Hodge Structures**, *by N. Mazzari*, Communications in Algebra, no. 39-4, 1372–1393, 2011.
  DOI: 10.1080/00927871003705575 ; hal-00772054v1

- **Cycle classes and the syntomic regulator**, *by B. Chiarellotto, A. Ciccioni and N. Mazzari*, Algebra Number Theory, vol. 7 no. 3, 533–566, 2013.
  DOI: 10.2140/ant.2013.7.533 ; hal-00772050v1

- **The rigid syntomic spectrum**, *with F. Déglise*, Journal of the Institute of Mathematics of Jussieu, no. 4, 753–799, 2015.
  DOI: 10.1017/S1474748014000152 ; hal-00772055v1

- **On deformation of 1-motives**, *by A. Bertapelle and N. Mazzari*, Canadian Mathematical Bulletin, Volume 62, Issue 1 March 2019, pp. 11-22.
  DOI: 10.4153/CMB-2017-076-2 ; hal-01814268v1

- **The filtered Ogus realisation of Motives**, *by B. Chiarellotto, C. Lazda and N. Mazzari*, Journal of Algebra, Volume 527, 1 June 2019, Pages 348-365.
  DOI: 10.1016/j.jalgebra.2019.03.006 ; arXiv:1808.03146

– **The Fontaine–Ogus realisation of Laumon 1-motives**, *by N. Mazzari*, Communication in Algebra.
  DOI: 10.1080/00927872.2019.1640242 ; arXiv:1906.07436
– **Extensions of filtered Ogus structures**, *by B. Chiarellotto and N. Mazzari*, Applied Categorical Structures.
  DOI: 10.1007/s10485-019-09576-8
– **An Introduction to Perfectoid Spaces**, *with F. Andreatta, R. Brasca, O. Brinon, B. Chiarellotto, S. Panozzo, M. Seveso.*
  Book to published by the SMF, Panoramas et Synthèses
– **On log differentials of local fields**, *by N. Mazzari.*
  TO APPEAR in RSMUP 2021

Seminars

Talks

05/2010 **On syntomic cohomology**, *Algebraic geometry and related topics*, Palazzo Feltrinelli, Gargnano.

01/2012 **On rigid syntomic cohomology**, *IRMAR*, Rennes.
  Séminaire de géométrie algébrique

02/2012 **Sur la cohomologie syntomique rigide**, *IRMA*, Strasbourg.
  Géométrie algébrique et arithmétique : nouvelles tendances

04/2012 **Cohomologie syntomique rigide**, *UVSQ*, Versailles.
  Séminaire d'Algèbre et Géometrie

06/2012 **On the syntomic spectrum**, *Universität Regensburg.*
  Oberseminar Arithmetische Geometrie, invité par G. Tamme

09/2012 **Motifs et cohomologie des variétés p-adiques**, *IMB*, Bordeaux.
  Séminaire de Théorie des Nombres

10/2012 **Autour des cohomologies p-adiques absolues**, *Laboratoire de Mathématiques Nicolas Oresme*, Caen.
  Séminaire de Théorie des Nombres

01/2013 **On the syntomic regulator**, *University College London*, Londres.
  Number theory seminar invité par S. Zerbes

10/2014 **Motives and rigid syntomic cohomology**, *Workshop : p-adic Methods in Number Theory*, Milan.

09/2015 **Sull'uso del morfismo di Gysin in aritmetica**, *Convegno U.M.I.*, Siena.

09/2017 **Sur la Réalisation de Ogus des motifs**, *IF*, Grenoble.

Talks for workshops/schools

12/2011 **The weight-monodromy conjecture after P. Scholze**, *Università di Milano.*
  Almost Xmas Seminar

2012 **Le site cristallin et les D-modules**, *Groupe de travail cristallin*, Paris 13.

2012 **de Rham vs cristallin pour le groupe fondamental**, *Méthodes tannakiennes en géométrie diophantienne (d'après Minhyong Kim)*, Ecole Polytechnique, Paris.

12/2012 **Formule de Picard-Lefschetz**, *IHP*, Paris.
  Workshop : Les conjectures de Weil d'après Grothendieck et Deligne

02/2013 **la lissité de la courbe de Hecke d'aprés Bellaiche et Chenevier**, *Fonctions L p-adiques*, IMB, Bordeaux.

04/2013 **Espaces perfectoïdes et la conjecture de monodromie-poids** , *Espaces perfectoïdes (d'après Scholze)*, IMB, Bordeaux.

10/2013	**Variation de la hauteur de Faltings dans une classe d'isogénie**, *Rencontre ANR ARIVAF "Conjecture de Mordell : Faltings et Vojta-Bombieri"*, Bordeaux.
01/2014	**Comparaison étale/cristallin dans le cas admissible**, *Groupe de Travail : Théorèmes de comparaison et représentations galoisiennes*, CIRM, Luminy.
04/2014	**Le revêtement universel des groupes p-divisibles**, *Espace des modules des groupes p-divisibles (d'après Scholze-Weinstein)*, IMB, Bordeaux.
09/2015	**The weight-monodromy conjecture after P. Scholze**, *Summer school on Perfectoid Spaces*, (1 cours de 3 heures), Brixen.
07/2016	**Algebraic and formal geometry**, *Théorèmes d'algébrisation*, Île de Tatihou.

Activities

Visits

28/08/2016 28/09/2016	**Visiting Professor**, *UES El Salvador*.
01/02/2017 30/07/2017	**Visiting Researcher**, *Dipartimento di Matematica di Padova*.
09/05/2019 09/06/2019	**Visiting Professor**, *Department of Computer Science*, Università di Verona.

Organization

2011	**Almost Xmas Seminar**, *Dipartimento di Matematica "Federigo Enriques"*, Università di Milano.
2015	**GDT Varietés de Shimura**, *IMB*, Bordeaux, 1 semester.
2015	**Summer school on Perfectoid Spaces**, *With F. Andreatta, B. Chiarellotto and M. Longo*, Bressanone, 1 week.
2016	**Workshop on special values of L-functions**, *With D. Benois*, Bordeaux, 3 days.
2018	**GDT Répresentations p-adiques et valeurs speciales des fonctions L**, *With D. Benois*, Bordeuax, 1 semester.
2015-18	**Séminaire de théorie des nombres de Bordeaux**, *weekly seminar*.

Others

since 2013	Referee for *Mathematical Research Letters*, *Canadian Journal of Mathematics* and *Proceedings - Mathematical Sciences*.
since 2013	Member of the board and treasurer of the Societé Arithmetique de Bordeaux (managing the "Journal de Théorie des Nombres de Bordeaux")
2013-2015	Member of commission consultative 25 (managing the recruitment of new faculty members)

Students

2014	**Mémoire de M2 (ALGANT)**, *P. Gatti*, The Néron-Ogg-Shafarevich criterion.
2016	**Mémoire de M2 (ALGANT)**, *A. Toledo*, The infinitesimal site.
2018	**Mémoire de M2 (ALGANT)**, *Abhinadan*, p-adic Galois representations and elliptic curves.
2018	**Mémoire de M2** , *O. Nezer*, A functorial approach to Lubin–Tate theory.
2016-2020	**Ph.D in Pure Math**, *Davide Marangoni*, On derived de Rham cohomology, With B. Morin and F. Andreatta (Cotutelle Bordeaux-Milan).
2018	**Candidate Ph.D in Pure Math**, *Abhinandan*, On syntomic cohomology and special values, With D. Benois (Bordeaux).

Teaching

2009/10	**University of Padova**, TA for the classes "Geometria 2", "Analisi 1" and "Analisi 2" for Pure Mathematics..
2012/13	**Bordeaux**, *128h*, Fondamentaux pour les mathématiques et l'informatique (35h class) ; Calcul scientifique et symbolique, logiciels (35h practice) ; Mathématiques pour biologistes 2 (2 groups x 29h exercises).
2013/14	**Bordeaux**, *162h*, Fondamentaux pour les mathématiques et l'informatique (35h class) ; Mathématiques pou la Biologie (24h) ; Calcul scientifique et symbolique, logiciels (35h practice) ; Mathématiques pour biologistes 2 (2 groups x 29h exercises) ; Mémoires (10h).
2014/15	**Bordeaux**, *222h*, Mathématiques (Biologie) (24h exercises) ; Mathématiques pour biologistes S2 (29h exercises) ; Théorie des nombres (45h M1 exercises) ; Prepa INP (104h class and exercises of calculus and algebra) ; Responsabilities (20h).
2015/16	**Bordeaux**, *211h*, Mathématiques (Biologie) (30h exercises) ; Mathématiques pour biologistes S2 (29h exercises) ; Théorie des nombres (45h M1 exercises) ; Prepa INP (102h class and exercises of calculus and algebra) ; Responsabilities (5h).
2016/17	**Padova**, *12h*, Ph.D course "On the algebraic de Rham cohomology".
	UES El Salvador, *20h*, Number Theory, Invited Professor at the UES.
	Bordeaux, *96h*, Mathématiques Bio 3 (27h diagonalisation of matrices) ; Prepa INP (69h claculus).
2017/18	**Ca' Foscari/H-Farm**, *80h*, Mathematics for Decision Sciences 1 and 2.
	Bordeaux, *129h*, Mathématiques Bio 2 (66h linear algebra), Mathématiques Bio 4 (53h probability and statistics) ; Mémoires (10h).
2018/19	**Ca' Foscari/H-Farm**, *80h*, Mathematics for Decision Sciences 1 and 2.
	Bordeaux, *92h*, Mathématiques Bio 2 (66h linear algebra), Mathématiques Bio 4 (26h probability and statistics).
2019/20	**Ca' Foscari/H-Farm**, *80h*, Mathematics for Decision Sciences 1 and 2.
	Unipd, *40h*, Algebra Lineare e Gemetria (Ingegneria Biomedica).
2020/21	**Ca' Foscari/H-Farm**, *80h*, Mathematics for Decision Sciences 1 and 2.
	Unipd, *72h*, Algebra Lineare e Gemetria (Ingegneria).

Languages

– Italian : mother tongue.
– English : fluent.
– French : fluent.
– Spanish : fluent.

Certificates

– **R Programming**, *by Johns Hopkins University on Coursera.*
Certificate: VSXHQMEHV366

– **The Data Scientist's**, *by Johns Hopkins University on Coursera.*
Certificate: SBPNCRM5JVVA

– **Statistical Inference**, *by Johns Hopkins University on Coursera.*
Certificate: LRL5D3YCLATU

– **Getting and Cleaning Data**, *by Johns Hopkins University on Coursera.*
Certificate: ENMAMXQTK5H2