

Federico BINDA

PERSONAL DATA

ADDRESS: Dipartimento di Matematica “Federigo Enriques”,
Università degli Studi di Milano
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WORK EXPERIENCE

<i>Current</i>	Junior Assistant Professor (Ricercatore Tempo Determinato A), UNIVERSITÀ DEGLI STUDI DI MILANO, Italy
JUNE 2019	<i>MAT 02/ Algebra</i>
OCT. 2016- MAY 2019	Postdoctoral researcher at the UNIVERSITY OF REGENSBURG, Germany <i>SFB 1085 Higher Invariants</i> Arbeitsgruppe Prof. Dr. Motitz Kerz.
SEPT. 2015- SEPT. 2016	Wissenschaftlicher Mitarbeiter at the UNIVERSITY OF DUISBURG-ESSEN, Germany <i>DFG SPP 1786 “Homotopy theory and algebraic geometry”.</i> Arbeitsgruppe Prof. Dr. Marc Levine.
NOV. 2012 - SEPT. 2015	Promotionsstipendium (Ph.D. scholarship) at the UNIVERSITY OF DUISBURG-ESSEN, Germany. Arbeitsgruppe Prof. Dr. Marc Levine.

EDUCATION

AUGUST 2016	Dr. Rer. Nat. (Ph.D.) in MATHEMATICS, University of Duisburg-Essen , Essen Summa cum laude (<i>mit Auszeichnung</i>). Thesis: “Motives and algebraic cycles with moduli conditions” Advisor: Prof. Dr. Marc N. LEVINE
JULY 2012	M2R - Mathématiques Fondamentales et Appliquées (Master in pure Mathematics) École Normale Supérieure, École Polytechnique, Université Paris-Sud , Paris Advisor: Prof. Ahmed ABBES (CNRS - IHES)
JULY 2012	Master of science in PURE MATHEMATICS, University of Milan , Milan 110/110 <i>cum laude</i> . Thesis: “Hodge-Tate decomposition theorem for Abelian Varieties over p -adic fields” Advisor: Prof. Ahmed ABBES (CNRS - IHES)
JULY 2010	Undergraduate degree in PURE MATHEMATICS, University of Milan , Milan 110/110 <i>cum laude</i> . Thesis topic: “Units in quadratic number fields” Advisor: Prof. Massimo BERTOLINI

PUBLICATIONS AND PREPRINTS

1. **Torsion and divisibility for reciprocity sheaves and 0-cycles with modulus.** (with Jin Cao, Wataru Kai and Rin Sugiyama) *J. of Algebra*, Volume 469, 1 January 2017, Pages

437–463. [Published version](#).

2. **Algebraic cycles with moduli and regulator maps** (with Shuji Saito). Accepted for publication in *J. of the Inst. of Math. Jussieu*. 2018. [First View](#).
3. **Zero cycles with modulus and zero cycles on singular varieties**. (with Amalendu Krishna) *Compositio Math.*, Volume 154, 1, January 2018, Pages 120-187. [Published version](#).
4. **Torsion zero cycles with modulus on affine varieties**. *J. of Pure and App. Algebra*, Volume 222, Issue 1, January 2018, Pages 61-74. [Published version](#).
5. **A cycle class map for zero cycles with modulus to higher relative K-groups**. Accepted for publication in *Documenta Math.* 2018. [Online version](#).
6. **A Motivic homotopy theory without \mathbb{A}^1 -invariance**. to appear in *Math. Zeit.*, 2019 [Online version](#).
7. **Rigidity for relative 0-cycles** (with Amalendu Krishna). to appear in *Ann. Sc. Norm. Sup Pisa*, 2019. [Online version](#).
8. **Semi-purity for cycles with modulus** (with Shuji Saito). arXiv:1812.01878 [mathAG]. (2018). [Online version](#).
9. **On Laumon 1-motives and motives with modulus** (with Shuji Saito). In preparation. Draft available on request.
10. **Levine-Weibel Chow group and motivic cohomology of singular varieties** (with Amalendu Krishna). In preparation. Draft available on request.
11. **Rigidity for relative 0-cycles II. The quasi-projective case** (with Amalendu Krishna). In preparation.
12. **On the Levine-Weibel Chow group of product of curves** (with Wataru Kai and Takao Yamazaki). In preparation.
13. **Triangulated categories of logarithmic motives over a field** (with Paul Arne Østavae and Doosung Park). In preparation.

THESIS **Motives and algebraic cycles with moduli conditions.**

Ph.D. thesis, University of Duisburg-Essen (2016).

DuEPublico ID: 41950. [Online version](#).

SCHOLARSHIPS AND PRIZES

NOV. 2012 - SEPT. 2015	Promotionsstipendium (graduate student scholarship). University of Duisburg-Essen.
SEPT. 2011	Cariplo foundation scholarship for excellent master students (€10,000)
2010 and 2011	ALGANT Excellence Scholarship programme (ALEXS).
2007 -2010	Undergraduate award (tuition waiver based on grades and credits). University of Milan.

RESEARCH VISITS (AT LEAST 2 WEEKS)

MAR. - APR. 2019	Oslo University , Norway Host: P.-A. Østvær
JAN. - FEB. 2019	Tata Institute of Fundamental Research , India Host: A. Krishna.
APR. 2018	Tohoku University , Japan Host: T. Yamazaki
MAR. 2018	Oslo University , Norway Host: P.-A. Østvær
JAN. - MAR. 2018	Tata Institute of Fundamental Research , India Host: A. Krishna.
JUN. - AUG. 2017	Hausdorff Research Institute for Mathematics , Germany <i>K</i> -theory and related fields - Hausdorff trimester program.
MAR. - APR. 2017	Institut Mittag-Leffler , Sweden Algebro-Geometric and Homotopical Methods - trimester program.
FEB. 2017	Tohoku University , Japan Host: T. Yamazaki
NOV. - DEC. 2016	Tata Institute of Fundamental Research , India Host: A. Krishna.
SEPT. 2015	Tata Institute of Fundamental Research , India Host: A. Krishna.
AUG. - SEPT. 2014	Tata Institute of Fundamental Research , India Host: A. Krishna.
MAR. 2013	University of Milan , Italy Host: L. Barbieri-Viale

ADMINISTRATIVE DUTIES

MAY 2018	Organization of the workshop <i>Motivic homotopy theory and refined enumerative geometry</i> University of Duisburg Essen. Sponsor: DFG SPP 1786 "Homotopy Theory and Algebraic Geometry". Conference website.
SEPTEMBER 2019	co-organization of the workshop <i>Haramura School on Derived Algebraic geometry</i> University of Tokyo. Sponsor: JSPS via several grants. Conference website.

SELECTION OF SEMINARS AND TALKS

- SEPT. 2019 *Triangulated categories of logarithmic motives*
Workshop “Regulators in Niseko”, Niseko, Hokkaido (Japan)
- JUNE 2019 *Specialization theorems for cycles of relative dimension zero*
Algebraic geometry seminar, University of Rome “La Sapienza”
- FEB. 2019 *Semi-purity for cycles with modulus*
Workshop “Motives in Tokyo”, University of Tokyo
- SEPT. 2018 *Specialization theorems for cycles of relative dimension zero*
Motives in St. Petersburg 2018, Euler International Mathematical Institute, St. Petersburg
- APR. 2018 *Specialization theorems for cycles of relative dimension zero*
Algebraic geometry seminar, Tohoku University, Sendai
- MAR. 2018 *Rigidity for relative 0-cycles*
Conference “Motives in Tokyo, on the occasion of Shuji Saito’s 60th Birthday”, University of Tokyo
- MAR. 2018 *Rigidity for relative 0-cycles*
Geometry and topology seminar, Oslo University
- FEB. 2018 *Rigidity for relative 0-cycles*
Conference “ K -theory, \mathbb{A}^1 -homotopy and quadratic forms”, University of Warwick, Coventry (UK)
- FEB. 2018 *Laumon 1-motives and motives with modulus*
Geometry seminar, Tata Institute of Fundamental Research, Mumbai
- NOV. 2017 *Motivic cohomology of normal crossing varieties and restriction of zero cycles*
Algebraic geometry and topology seminar, Universität Osnabrück, Osnabrück
- JUNE 2017 *Towards a motivic (homotopy) theory without \mathbb{A}^1 -invariance*
Workshop “ K -theory and related fields”, Hausdorff Research Institute for Mathematics, Bonn
- APR. 2017 *Towards a motivic (homotopy) theory without \mathbb{A}^1 -invariance*
Algebro-Geometric and Homotopical Methods - trimester program, Institut Mittag-Leffler, Djursholm
- FEB. 2017 *Towards a non- \mathbb{A}^1 -invariant motivic theory*
Algebraic geometry seminar, Tohoku University, Sendai
- FEB. 2017 *Zero cycles with modulus and zero cycles on singular varieties*
Workshop “Motives in Tokyo”, University of Tokyo.
- DEC. 2016 *Cycles with modulus and non \mathbb{A}^1 -invariant motives,*
Workshop “Around motives”, University of Milan (Italy).
- JUNE 2016 *On motives with moduli conditions,*
Workshop “Homotopical approaches to categories and geometry”, Freiburg.
- APR. 2016 *Zero cycles with modulus and zero cycles on singular varieties*
Workshop “Generalizations of \mathbb{A}^1 -Homotopy Invariance in Algebraic Geometry and Homotopy Theory”
Freie Universität Berlin. Zinnowitz-Usedom
- JAN. 2016 *Cycles with modulus, regulators and applications,*
Algebraic geometry seminar, Université Grenoble-Alpes, Grenoble
- OCT. 2014 *Algebraic Cycles with modulus and Applications,*
Conference for Young Researchers in Arithmetic and Algebraic Geometry, University of Bonn
- SEPT. 2011 *Model categories, a tour de force,*
Summer School “Cohomology theories: a roadmap”, Brixen.

SELECTION OF CONFERENCES AND ADVANCES COURSES

- FEB. 2019 *International workshop on Motives in Tokyo*
University of Tokyo, Tokyo, Japan
- SEP. 2018 *Conference Motives in St. Petersburg*
Euler International Mathematical Institute, St. Petersburg, Russia
- APR. 2018 *Conference Motives in Tokyo, on the occasion of Shuji Saito's 60th Birthday*
University of Tokyo, Tokyo, Japan
- FEB. 2018 *Conference K -theory, \mathbb{A}^1 -homotopy and quadratic forms*
University of Warwick, Coventry, UK
- SEPT. 2017 *Workshop: Topological cyclic homology and p -adic Hodge theory*
University of Tokyo and Tokyo Institute of Technology, Haramura, Japan
- JUNE 2017 *Workshop: K -theory and related fields*
Hausdorff Research Institute for Mathematics, Bonn, Germany
- FEB. 2017 *International workshop on Motives in Tokyo*
University of Tokyo, Tokyo, Japan
- SEPT. 2016 *Conference Differential forms in algebraic geometry*
University of Freiburg. Freiburg, Germany.
- JULY 2016 *Algebraic K -theory and motivic cohomology*
Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany
- JUN. 2016 *Workshop Homotopical approaches to categories and geometry*
University of Freiburg. Freiburg, Germany.
- APR. 2016 *Generalizations of \mathbb{A}^1 -Homotopy Invariance in Algebraic Geometry and Homotopy Theory*
Freie Universität Berlin. Zinnowitz-Usedom
- AUG. 2015 *Summer school Algebraic K -theory and trace methods*
University of Regensburg, Regensburg, Germany.
- JULY 2015 *AMS Summer Institute (Algebraic Geometry)*
University of Utah, Salt Lake City, USA.
- MAR. 2015 *School " p -adic arithmetic"*
University of Duisburg-Essen, Essen, Germany.
- NOV. 2014 *International Workshop on motives in Tokyo*
University of Tokyo, Tokyo, Japan
- OCT. 2014 *Conference for Young Researchers in Arithmetic and Algebraic Geometry*
University of Bonn, Bonn, Germany
- OCT. 2014 *Summer school Continuous K -theory of p -adic rings*
Kleinwalsertal, Austria
- NOV. 2013 *International Workshop on motives in Tokyo*
University of Tokyo, Tokyo, Japan
- SEPT. 2013 *Summer school Motivic Galois group*
Alfréd Rényi Institute of Mathematics. Budapest, Hungary
- JULY 2013 *Conference Arithmetic Geometry*
Banach conference center, Warsaw, Poland
- SEPT. 2011 *Summer school Cohomology theories: a roadmap*
University of Padova, Brixen, Italy
- JULY 2011 *Summer school The Birch and Swinnerton-Dyer conjecture*
Alghero, Italy.

LANGUAGES

- ITALIAN: Mother tongue
ENGLISH: Fluent
FRENCH: Fluent
GERMAN: Basic Knowledge