

OLIVIER HAUTION

olivier.haution@gmail.com — <https://haution.github.io>

PERSONAL INFORMATION

ADDRESS Steinerweg 1a, 81241 Munich, Germany
FAMILY STATUS Married, 2 children (born 2017, 2019)
LANGUAGES French, English, German

APPOINTMENTS

04/2021— [Heisenberg position](#), LMU München
04/2020—03/2021 Interim professor (W2), LMU München
10/2018—03/2020 [Heisenberg position](#), LMU München
10/2012—09/2018 Assistant (Akademischer Rat auf Zeit), LMU München
09/2010—09/2012 Research fellow, University of Nottingham
09/2009—08/2010 Temporary lecturer (ATER à temps complet), Université Paris 6
09/2006—08/2009 Teaching assistant (Allocataire–Moniteur), Université Paris 6
09/2005—08/2006 Tutor, École Polytechnique

EDUCATION

2016 Habilitation, Mathematics, LMU München (obtained Jan. 18, 2016),
 “Integrality properties of algebraic cycles”
2006—2010 Ph.D., Mathematics, Université Paris 6 (obtained Feb. 9, 2010),
 “Steenrod operations and quadratic forms” (advisor: [Nikita Karpenko](#))
2005—2006 Master, Mathematics, École Polytechnique
2002—2005 Ingénieur Polytechnicien program, École Polytechnique
2000—2002 Classes préparatoires, Lycée la Martinière Montplaisir, Lyon

AWARDS, GRANTS

2020 – 2023 DFG individual research grant “[Intersection theory and cobordism with a quadratic twist](#)”, sole PI, supporting one postdoctoral position
2018 – 2024 DFG [Heisenberg Programme](#), sole PI
2016–2019 DFG individual research grant “[New perspectives for canonical dimension](#)”, sole PI
2006–2009 Ph.D. scholarship “AMX” funded by the French Ministry of Research
2005 “Prix d’option scientifique” awarded by the Ecole Polytechnique for an internship at the Tata Institute of Fundamental Research, Mumbai

RESEARCH INTERESTS

Motives, quadratic forms, algebraic cobordism, finite group actions on varieties

PUBLICATIONS

- O. Hauton, On the algebraic cobordism ring of involutions, **Annales Scientifiques de l'École Normale Supérieure**, to appear, [arXiv:2008.11534](#)
- J. Fasel and O. Hauton, The stable Adams operations on Hermitian K -theory, [arXiv:2005.08871](#)
- O. Hauton and A. S. Merkurjev, **Connective K -theory and Adams operations**, **EMS Surveys in Mathematical Sciences**, 8 (2021), no. 1-2, 135–162
- O. Hauton, **Involutions and Chern numbers of varieties**, **Commentarii Mathematici Helvetici**, 95 (2020), no. 4, 811–843
- O. Hauton, **Diagonalisable p -groups cannot fix exactly one point on projective varieties**, **Journal of Algebraic Geometry**, 29 (2020), 373–402
- O. Hauton, **Fixed point theorems involving numerical invariants**, **Compositio Mathematica**, 155 (2019), no. 2, 260–288
- O. Hauton, **On rational fixed points of finite group actions on the affine space**, **Transactions of the American Mathematical Society**, 369 (2017), 8277–8290
- O. Hauton, **Involutions of varieties and Rost's degree formula**, **Journal für die reine und angewandte Mathematik (Crelle)**, 745 (2018), 231–252
- O. Hauton, **Detection by regular schemes in degree two**, **Algebraic Geometry**, 2 (2015), no. 1, 44–61
- O. Hauton, **Invariants of upper motives**, **Documenta Mathematica**, 18 (2013), 1555–1572
- O. Hauton, **Duality and the topological filtration**, **Mathematische Annalen**, 357 (2013), no. 4, 1425–1454
- O. Hauton, **Integrality of the Chern character in small codimension**, **Advances in Mathematics**, 231 (2012), no. 2, 855–878
- O. Hauton, **Degree formula for the Euler characteristic**, **Proceedings of the American Mathematical Society**, 141 (2013), no. 6, 1863–1869
- O. Hauton, **Reduced Steenrod operations and resolution of singularities**, **Journal of K -theory**, 9 (2012), no. 2, 269–290
- O. Hauton, **On the first Steenrod square for Chow groups**, **American Journal of Mathematics**, 135 (2013), no. 1, 53–63
- O. Hauton, **Lifting of coefficients for Chow motives of quadrics**, in Quadratic forms, linear algebraic groups, and cohomology, volume 18 of **Developments in Mathematics**, 239–247, Springer, New York (2010)

CONFERENCE TALKS

- [Workshop on birational geometry](#), Nov. 2020, Higher School of Economics Moscow (online)
- [Workshop “Affine Algebraic Groups, Motives and Cohomological Invariants”](#), Sept. 2018, Banff International Research Station
- [Workshop on motivic and equivariant homotopy theory](#), Oct. 2017, Osnabrück
- [International Conference in \$K\$ -theory](#), Aug. 2016, Sydney
- [Workshop “Algebraic Cobordism and Projective Homogeneous Varieties”](#), Feb. 2016, Mathematisches Forschungsinstitut Oberwolfach
- [Workshop “The Use of Linear Algebraic Groups in Geometry and Number Theory”](#), Sept. 2015, Banff International Research Station
- [Conference “\(A\)round forms, cycles and motives”](#), Sept. 2014, Mainz
- [Workshop “Projective modules and A1-homotopy theory”](#), May 2014, American Institute of Mathematics, Palo Alto
- [Workshop “Étale and motivic homotopy theory”](#), Mar. 2014, Heidelberg
- [Spring school and workshop on Torsors, Motives and Cohomological Invariants](#), May 2013, Field Institute, Toronto
- [Workshop “Lie Algebras, Torsors and Cohomological Invariants”](#), Oct. 2012, Banff International Research Station
- [Joint Mathematics Meetings AMS Special Session “Linear Algebraic Groups: Their Arithmetic, Geometry, and Representations”](#), Jan. 2012, Boston
- [Conference “Ramification in Algebra and Geometry at Emory”](#), May 2011, Atlanta
- [Mini-course “Torsors and Geometry of Quadrics”](#), June 2009, Lens

SUPERVISION

- One postdoctoral researcher : Fabio Tanania (3 years, since Mar. 2020)
- One Bachelor’s thesis “Nonsolvability of degree 5 equations” (2016)

TEACHING

2020–2021	Lectures and exercises : Brauer groups of fields Reading course : étale cohomology
2019–2020	Lectures and exercises : Galois cohomology Student seminar : number theory for future teachers (2 groups)
2018–2019	Student seminar : topological data analysis
2017—2018	Lectures and exercises : intersection theory Exercises : linear algebra I
2016—2017	Lectures and exercises : homological methods in commutative algebra Exercises : algebraic geometry I and II
2015—2016	Exercises : algebra, linear algebra II Student seminar : quadratic forms and arithmetic
2014—2015	Lectures and exercises : intersection theory Exercises : algebraic geometry I and II Student seminar : Brauer groups and Galois cohomology
2013—2014	Lectures and exercises : local algebra Exercises : linear algebra II Student seminar: quadratic forms
2012—2013	Exercises : linear algebra I and II Student seminars : introduction to motivic cohomology and motives, introduction to arithmetic
2009—2010	Tutorials, 160 hours (vector spaces, arithmetic)
2006—2009	Tutorials, 3x64 hours (linear algebra, quadratic forms and geometry, arithmetic)
2005—2006	Individual tutoring, 60 hours (distributions, dynamical systems)

Date: January 11, 2022