

OLIVIER HAUTION

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PERSONAL INFORMATION

Address Steinerweg 1a, 81241 Munich, Germany
Family status Married, 2 children (born 2017, 2019)
Languages French, English, German

APPOINTMENTS

04/2022–09/2022 Interim professor (W3), TU München
04/2020–03/2021 Interim professor (W2), LMU München
10/2018–present [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
2018–2025 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 École polytechnique for an internship at the Tata institute of fundamental research, Mumbai

- O. Hauton, Motivic Pontryagin classes and hyperbolic orientations, [arXiv:2203.06017](#)
- O. Hauton, Odd rank vector bundles in eta-periodic motivic homotopy theory, [arXiv:2203.06021](#)
- 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)

RESEARCH INTERESTS

Motives, quadratic forms, finite group actions on varieties, motivic homotopy theory

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 \$A_1\$ -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)

Lectures

2021–2022	Algebraic number theory
2020–2021	Brauer groups of fields
2019–2020	Galois cohomology
2017–2018	Intersection theory
2016–2017	Homological methods in commutative algebra
2014–2015	Intersection theory
2013–2014	Local algebra

Exercises

2021–2022	Algebraic number theory
2020–2021	Brauer groups of fields
2019–2020	Galois cohomology
2017–2018	Intersection theory Linear algebra I
2016–2017	Homological methods in commutative algebra Algebraic geometry I Algebraic geometry II
2015–2016	Algebra Linear algebra II
2014–2015	Intersection theory Algebraic geometry I Algebraic geometry II
2013–2014	Local algebra Linear algebra II
2012–2013	Linear algebra I Linear algebra II
2009–2010	Linear algebra II ($\times 3$) Arithmetic ($\times 3$)
2008–2009	Arithmetic
2007–2008	Arithmetic
2006–2007	Quadratic forms and geometry
2005–2006	Individual tutoring, 60 hours (distributions, dynamical systems)

Student seminars

- 2020–2021 Reading course on étale cohomology
- 2018–2019 Topological data analysis
- 2015–2016 Quadratic forms and arithmetic
- 2014–2015 Brauer groups and Galois cohomology
- 2013–2014 Quadratic forms
- 2012–2013 Introduction to motivic cohomology and motives
Arithmetic

Service teaching

- 2021–2022 Exam preparation course in algebra for future teachers
- 2019–2020 Number theory for future teachers ($\times 2$) (student seminar)
- 2006–2007 Matrices for physics/chemistry students (exercises)