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 (on leave for the above positions)
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

2021–2030	"Abilitazione Scientifica Nazionale" (01/A2), prima & seconda fascia.
2020–2023	DFG individual research grant "Intersection theory and cobordism with a quadratic twist", sole PI, one postdoctoral position (286.200 €)
2018–2025	DFG Heisenberg Programme, sole PI (602.500 €)
2016–2019	DFG individual research grant "New perspectives for canonical dimension", sole PI (14.400 €)
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

Publications

- O. Haution, Motivic Pontryagin classes and hyperbolic orientations, arXiv:2203.06017
- O. Haution, Odd rank vector bundles in eta-periodic motivic homotopy theory, arXiv:2203.06021
- J. Fasel and O. Haution, The stable Adams operations on Hermitian K-theory, arXiv:2005.08871
- O. Haution, On the algebraic cobordism ring of involutions, **Annales Scientifiques de l'École Normale Supérieure**, to appear, arXiv:2008.11534
- O. Haution and A. S. Merkurjev, Connective K-theory and Adams operations, **EMS Surveys in Mathematical Sciences**, 8 (2021), no. 1-2, 135–162
- O. Haution, Involutions and Chern numbers of varieties, **Commentarii Mathematici Helvetici**, 95 (2020), no. 4, 811–843
- O. Haution, Diagonalisable p-groups cannot fix exactly one point on projective varieties, **Journal of Algebraic Geometry**, 29 (2020), 373–402
- O. Haution, Fixed point theorems involving numerical invariants, **Compositio Mathematica**, 155 (2019), no. 2, 260–288
- O. Haution, On rational fixed points of finite group actions on the affine space, **Transactions of the American Mathematical Society**, 369 (2017), 8277–8290
- O. Haution, Involutions of varieties and Rost's degree formula, **Journal für die reine und angewandte Mathematik (Crelle)**, 745 (2018), 231–252
- O. Haution, Detection by regular schemes in degree two, **Algebraic Geometry**, 2 (2015), no. 1, 44–61
- O. Haution, Invariants of upper motives, **Documenta Mathematica**, 18 (2013), 1555–1572
- O. Haution, Duality and the topological filtration, **Mathematische Annalen**, 357 (2013), no. 4, 1425–1454
- O. Haution, Integrality of the Chern character in small codimension, **Advances in Mathematics**, 231 (2012), no. 2, 855–878
- O. Haution, Degree formula for the Euler characteristic, **Proceedings of the American Mathematical Society**, 141 (2013), no. 6, 1863-1869
- O. Haution, Reduced Steenrod operations and resolution of singularities, **Journal of K-theory**, 9 (2012), no. 2, 269–290
- O. Haution, On the first Steenrod square for Chow groups, **American Journal of Mathematics**, 135 (2013), no. 1, 53–63
- O. Haution, 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

Motivic theories, quadratic forms, finite group actions on varieties

Conference talks

- Summer school "Motives in Ratisbona", Sept. 2022, Regensburg (series of lectures)
- 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)

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)

Date: May 31, 2022