Olivier Haution

Personal information

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Education

2015	Habilitation (Mathematics), LMU Munich (awarded Jan. 18, 2016), "Integrality properties of algebraic cycles".
2006—2010	Ph.D. (Mathematics), Université Paris 6 (awarded Feb. 9, 2010), "Steenrod operations and quadratic forms" (advisor: Nikita Karpenko).
2005—2006	Master (Mathematics), École Polytechnique.
2002—2005	Engineering program, École Polytechnique.
2000—2002	Classes préparatoires, Lycée la Martinière Montplaisir, Lyon.

Appointments

2018—	Heisenberg fellow, Ludwig-Maximilians-Universität München.
2012—2018	Temporary assistant professor (Akademischer Rat auf Zeit), Ludwig-Maximilians-Universität München.
2010—2012	Research fellow, University of Nottingham.
2009—2010	Temporary lecturer (ATER à temps complet), Université Paris 6.
2006—2009	Teaching assistant (Allocataire/Moniteur), Université Paris 6.
2005—2006	Tutor, École Polytechnique.

Awards, Grants

2018 –	Heisenberg fellowship (funded by the DFG).
2016–2019	DFG Individual Research Grant "New perspectives for canonical dimension" (Sole PI).
2006–2009	Research grant "AMX" funded by the French Ministry of research that are specifically aimed at former Ecole Polytechnique "Ingenieur" students (Ph.D. scholarship).
2005	"Prix d'option" awarded by the Ecole Polytechnique for an internship at the Tata Institute of Fundamental Research, Mumbai.

Research interests

Algebraic cycles, motives, K-theory, finite group actions on algebraic varieties.

Publications

- O. Haution, Involutions and Chern numbers of varieties, arXiv:1903.07304.
- O. Haution, Diagonalisable p-groups cannot fix exactly one point on projective varieties, **Journal of Algebraic Geometry**, to appear.
- 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).

Conference talks

- 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.

Teaching

2019	Seminar : topological data analysis.
2017—2018	Tutorials : linear algebra I. Lectures and tutorials : intersection theory.
2016—2017	Tutorials : algebraic geometry I and II. Lectures and tutorials : homological methods in commutative algebra.
2015—2016	Tutorials : algebra, linear algebra II. Student seminar : quadratic forms and arithmetic. Bachelor thesis : applications of Galois theory.
2014—2015	Lectures and tutorials : intersection theory. Tutorials : algebraic geometry I and II. Student seminar : Brauer groups and Galois cohomology.
2013—2014	Lectures and tutorials : local algebra. Tutorials : linear algebra II. Student seminar: quadratic forms (with Roland Lötscher).
2012—2013	Tutorials : linear algebra I and II. Student seminars : introduction to motivic cohomology and motives (with Fabien Morel), 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).

Languages

French, English, German.

Date: November 21, 2019