# Olivier Haution

## Personal information


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| Address | Mathematisches Institut der Universität München, Theresienstr. 39, D-80333 München, Germany |
| Email | olivier.haution@gmail.com |
| Webpage | https://haution.github.io |
| Orcid | https://orcid.org/0000-0003-1682-0524 |


## Education

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| 2015 | Habilitation, LMU Munich (defended November 26, 2015), "Integrality properties of algebraic cycles". |
| 2006—2009 | Ph.D. Mathematics, Université Paris 6 (defended December 9, 2009), "Steenrod operations and quadratic forms" (advisor: Nikita Karpenko). |
| 2005—2006 | Master of Mathematics, École Polytechnique. |
| 2002—2005 | Engineering program, École Polytechnique. |
| 2000—2002 | Classes préparatoires, Lycée la Martinière Montplaisir, Lyon. |

## Appointments

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| 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

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| 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, arXiv:1612.07663.
- 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", September 2018, Banff International Research Station.
- Workshop on motivic and equivariant homotopy theory, October 2017, Osnabrück.
- International Conference in $K$-theory, August 2016, Sydney.
- Workshop "Algebraic Cobordism and Projective Homogeneous Varieties", February 2016, Mathematisches Forschungsinstitut Oberwolfach.
- Workshop "The Use of Linear Algebraic Groups in Geometry and Number Theory", September 2015, Banff International Research Station.
- Conference "(A)round forms, cycles and motives", September 2014, Mainz.
- Workshop "Projective modules and A1-homotopy theory", May 2014, American Institute of Mathematics, Palo Alto.
- Workshop "Étale and motivic homotopy theory", March 2014, Heidelberg.
- Spring school and workshop on "Torsors, Motives and Cohomological Invariants", May 2013, Field Institute, Toronto.
- Workshop "Lie Algebras, Torsors and Cohomological Invariants", October 2012, Banff International Research Station.
- Joint Mathematics Meetings AMS Special Session "Linear Algebraic Groups: Their Arithmetic, Geometry, and Representations", January 2012, Boston.
- Conference "Ramification in Algebra and Geometry at Emory", May 2011, Atlanta.
- Mini-course "Torsors and Geometry of Quadrics", June 2009, Lens.

## Teaching

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| 2019 | Seminar : topological data analysis. |
| 2017—2018 | Tutorials : linear algebra I.<br>Lectures and tutorials : intersection theory. |
| 2016—2017 | Tutorials : algebraic geometry I and II.<br>Lectures and tutorials : homological methods in commutative algebra. |
| 2015—2016 | Tutorials : algebra, linear algebra II.<br>Student seminar : quadratic forms and arithmetic.<br>Bachelor thesis : applications of Galois theory. |
| 2014—2015 | Lectures and tutorials : intersection theory.<br>Tutorials : algebraic geometry I and II.<br>Student seminar : Brauer groups and Galois cohomology. |
| 2013—2014 | Lectures and tutorials : local algebra.<br>Tutorials : linear algebra II.<br>Student seminar: quadratic forms (with Roland Lötscher). |
| 2012—2013 | Tutorials : linear algebra I and II.<br>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: March 22, 2019