

SUSANNA ZIMMERMANN

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nationality: swiss
languages: german, english, french

Research interests: birational geometry, the Cremona groups, algebraic groups, algebraic geometry

Academic Career

since 9.2017	Maître de Conférence, Université d'Angers
10.2016–8.2017	Postdoc with Prof. S. Lamy, Université de Toulouse III Paul Sabatier; funded by Swiss National Science Foundation
8.9.2016	PhD defended with <i>summa cum laude</i> . Examinators: Prof. J. Blanc, Prof. I. Dolgachev, Prof. Y. Prokhorov Thesis: <i>Compositions and relations in the Cremona groups</i> .
2.2013–9.2016	PhD candidate supervised by Prof. J. Blanc, Dept. Mathematics and Computer Science, University of Basel
2015	Member of antelope program (by Equal Opportunity Office) at University of Basel
2013–2016	Member of Swiss Doctoral Programm in Mathematics; 2014–2016 Junior Council Member
8.2008–1.2013	M.Sc. in Mathematics at University Basel (8.2011–1.2013) Thesis: <i>Geometry and Invariants of the Affine Group</i> , supervised by Prof. H. Kraft B.Sc. in Mathematics at University of Basel (8.2008–8.2011)

Prépublications

- [3] C. URECH, S. ZIMMERMANN: A new presentation of the plane Cremona group. arXiv:1802.02735
- [2] S. LAMY, S. ZIMMERMANN: Signature morphisms from the Cremona group over a non-closed field. arXiv:1707.07955
- [1] S. ZIMMERMANN: The real plane Cremona group is a non-trivial amalgam. arXiv:1705.0750

Publications

- [6] T. DUCAT, I. HEDÉN, S. ZIMMERMANN: The decomposition groups of plane conics and plane rational cubics. Math.Res.Let (to appear).
- [5] M.F. ROBAYO, S. ZIMMERMANN: Infinite algebraic subgroups of the real Cremona group. Osaka J. of Math. (to appear).
- [4] J. BLANC, S. ZIMMERMANN: Topological simplicity of the Cremona groups. Amer. Journal of Math. (to appear).
- [3] S. ZIMMERMANN: The Abelianisation of the real Cremona group. Duke Math. J. vol. 167, no.2 (2018), 211–267.
- [2] I. HEDÉN, S. ZIMMERMANN: The Decomposition group of a line. Proc. Amer. Math. Soc. 145 (2017), no. 9, 3665–3680.
- [1] S. ZIMMERMANN: The Cremona group is compactly presented. J. of the London Math. Soc., **93**, no.1 (2016), 25–46.

Fundings

2.2018–11.2018	CNRS	PEPS projet with E. Floris (Université de Poitiers) et R. Terpereau (Université de Bourgogne)
10.2016–8.2017	Swiss National Science Foundation	Early.Postdoc-Mobility grant No. P2BSP2_168743
2.2016	Equal Opportunity Office of University of Basel	Research stay at Centro de Matemática, Universidad de la República Uruguay travel funding: 1280.- CHF

Organised academic events

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| 7.–11.1.2019 | 8th swiss-french workshop in Algebraic Geometry, Charmey (Switzerland), with R. Terpereau (Université de Bourgogne) and Prof. P. Habegger (University of Basel) |
| 5.–6.6.2018 | Rencontre Angers–Poitiers en Géométrie Algébrique, Université d'Angers, with E. Floris (Université de Poitiers) |
| 8.–12.1.2018 | 7th swiss-french workshop in Algebraic Geometry, Charmey (Switzerland), with R. Terpereau (Université de Bourgogne) and Prof. P. Habegger (University of Basel) |
| 9.–13.1.2017 | 6th swiss-french workshop in Algebraic Geometry, Charmey (Switzerland), with Prof. J. Blanc (University of Basel), A. Dubouloz (Université de Bourgogne) and Prof. P. Habegger (University of Basel) |
| 5.–16.9.2016 | Cremona conference Basel 2016, with Prof. J. Blanc, M. Hemmig, C. Urech (University of Basel) |
| 9.2014–7.2016 | Graduate seminar <i>Bernoullis Tafelrunde</i> , University of Basel, founded and organised with C. Urech (University of Basel) |
| 4.–5.9.2014 | 13th Graduate Colloquium, University of Basel, with M.F. Robayo (University of Basel) |

Academic Responsibilities

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| 11.12.2017 | Member of thesis defence jury of Clément Fromenteau, Université d'Angers |
| 14.9.2017 | Member of thesis defence jury of Anne Lonjou, Université de Toulouse |
| 2013–2016 | Member of Swiss Doctoral Program in Mathematics; 2014–2016 Junior Council Member |
| 1.2015–9.2016 | Assignment of tutorials to the assistants of the Dept. of Mathematics and Computer Science, University of Basel |
| 8.2010–1.2016 | Teaching at Depart. Mathematics and Computer Science |

Invited talks

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| 9.–13.4.2018 | French-German Meeting in Complex Algebraic Geometry, Luminy (Marseille), <i>Signature morphisms from the Cremona group</i> . |
| 12.–16.2.2018 | Polynomial Rings and Affine Algebraic Geometry, Tokyo Metropolitan University, <i>Birational transformations of the affine plane over perfect fields</i> . |
| 23.1.2018 | Oberseminar Algebra and Number theory, University of Cologne, <i>Birational maps of the plane over a perfect field</i> . |
| 21.11.2017 | Seminar Algebra und Geometry, University of Basel, <i>Signature morphisms of the Cremona group of the plane</i> . |
| 8.11.2017 | Séminaire de topologie, géométrie et algèbre, Université de Nantes, <i>Des morphismes du groupe de Cremona réel</i> . |
| 12.10.2017 | Séminaire Groupes, Algèbre et Géométrie, Université de Poitiers, <i>Des morphismes du groupe de Cremona du plan</i> . |
| 26.–30.6.2017 | Edge Days, University of Edinburgh, <i>Birational transformations of the plane over a non-closed field</i> . |
| 17.–19.5.2017 | Rencontre del Duca, Université de Rennes 1, <i>mini course: The group of birational transformations of the real projective plane</i> . |
| 10.4.2017 | Séminaire Algèbre et géométries, Fourier Institut Grenoble, <i>Sous-groupes algébriques du groupe de Cremona</i> . |
| 17.3.2017 | Basel-EPFL Meeting, <i>Algebraic subgroups of the real Cremona group</i> . |
| 2.3.2017 | Séminaire de Géométrie algébrique, Université de Paris Diderot, Institut de Mathématiques Jussieu-Paris Rive Gauche, <i>Les symétries réelles du plan projectif</i> . |
| 9.12.2016 | Oberseminar: Algebra, Zahlentheorie und algebraische Geometrie, University of Freiburg, <i>The Cremona group of the real and the complex plane</i> . |

- 14.–18.10.2016 Groups of birational automorphisms, HSE, Moskow, *The abelianisation of the real Cremona group*.
- 10.10.2016 Séminaire de Géométrie Algébrique Réelle Angers-Brest-Rennes, Université Rennes 1, *The Cremona group of the real plane*.
- 14.3.2016 Séminaire Algèbre et Géométrie, Fourier Institut, Grenoble, *The Cremona group of the real plane*.
- 13.11.2015 Séminaire de géométrie algébrique, Universtié de Angers, *The Abelianisation of the real plane Cremona group*.
- 22.–26.6.2015 Second Swissmap Geometry & Topology Conference, Les Diablerets, *Abelian Quotients of the real Cremona group*.
- 15.6.2015 Joint Seminar in Algebraic Geometry and Complex Geometry (Basel-Freiburg-Nancy-Strasbourg), Université de Strasbourg, *Abelian Quotients of the real Cremona group*.
- 24.3.2015 Seminar on Algebra, Geometry and Physics, Max-Planck-Institut, Bonn, *Is the Cremona group compactly presented?*
- 3.3.2015 Séminaire Groupes et Géométrie, Université de Genève, *Compact presentation of the Cremona group*.
- 11.11.2014 Séminaire Géométrie et Systèmes Dynamiques, Université de Bourgogne, *Compact presentation of the Cremona group*.
- 13.–16.10.2014 BirPol 8 - PTT, Université de Toulouse Paul Sabatier, *Compact presentation of the Cremona group*.

Other talks

- 23.–27.2.2017 Algebraic Geometry and Complex Geometry, Luminy (Marseille). 10min talk: *The real Cremona group*.
- 29.12.2016 Séminaire Géométrie et Topologie, Université de Toulouse, *Sur des sous-groupes algébriques du groupe de Cremona de dimension 2*.
- 15.12.2015 Dijon-Basel Seminar, Université de Bourgogne, Dijon, *The Decomposition group of a line*.
- 29.8.2015 School (and workshop) on finite subgroups of Cremona groups, Povo (Trento), *The Abelianisation of the real Cremona group*.
- 15.6.2015 Joint Seminar in Algebraic Geometry and Complex Geometry (Basel-Freiburg-Nancy-Strasbourg), Université de Strasbourg, *Abelian Quotients of the real Cremona group*.
- 18.9.2013 BirPol 5 Algebraic Geometry in Dijon, Université de Bourgogne, *The Cremona group endowed with the Euclidean topology is compactly presentable*.
- 9.9.2013 11th Graduate Colloquium, Université de Fribourg, *The Cremona group endowed with the Euclidean topology is compactly presentable*.

Other activities at university

- 9.2015 Management and organisation of the Mathematics exposition at Basler Uninacht 2015: organised with Linda Frey, Olivia Ebnetter
- 2015 Workshops, trainings and coachings organised by antelope Basel
- 4.2012 Management of the exposition of the Mathematical Institute at TunBasel 2012 (muba 2012); organised with Oliver De Capitani, Sabine Schädelin, Nadine Scossa
- 2011–2015 Teaching Vorkurs Mathematik, University of Basel
- 2010–2015 Teaching Studienwoche kids@science (by Stiftung Schweizer Jugend forscht)

Teaching

Université de Angers	enseignant-chercheur
Université de Toulouse Paul Sabatier	In charge of "Projet de Stage L3" (4 month project) de Pauline Lino Bras, spring 2017
University of Basel 8.2010–9.2016	Teaching assistant <u>During my phd:</u> <ul style="list-style-type: none"> ● <i>Master courses:</i> Projective Algebraic Curves and Surfaces I + II, 2015 ● <i>Bachelor courses:</i> Differential Geometry for scientists (Mathematische Methoden IV), spring 2014 Differential Geometry, spring 2013 Seminar for Gifted Highschool Students (Schülerseminar), autumns 2014–2016 <u>During my bachelor / master:</u> <ul style="list-style-type: none"> ● <i>Bachelor courses:</i> Seminar for Gifted Highschool Students (Schülerseminar), autumn 2013 Linear Algebra and Analysis I (Mathematische Methoden I), autumn 2012 Linear Algebra II, spring 2011 Algebra, autumn 2011 Linear Algebra and Analysis I (Mathematische Methoden I), autumn 2010
2011–2015	Lecturer of Vorkurs Mathematik