

SUSANNA ZIMMERMANN

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nationality: swiss
languages: german, english, french

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

Academic Career

since 9.2017	Maître de Conférence, Université de 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)

Publications

- S. LAMY, S. ZIMMERMANN: Signature morphisms from the Cremona group over a non-closed field. arXiv:1707.07955
- S. ZIMMERMANN: The real plane Cremona group is a non-trivial amalgam. arXiv:1705.07500
- T. DUCAT, I. HEDÉN, S. ZIMMERMANN: The decomposition groups of plane conics and plane rational cubics. arXiv:1601.02725
- M.F. ROBAYO, S. ZIMMERMANN: Infinite algebraic subgroups of the real Cremona group. Osaka J. of Math. (to appear).
- S. ZIMMERMANN: The Abelianisation of the real Cremona group. Duke Math. Journal (to appear)
- J. BLANC, S. ZIMMERMANN: Topological simplicity of the Cremona groups. Amer. Journal of Math. (to appear)
- I. HEDÉN, S. ZIMMERMANN: The Decomposition group of a line. Proc. AMS 145 (2017), no. 9, 3665–3680.
- S. ZIMMERMANN: The Cremona group is compactly presented. J. of the London Math. Soc., 93, no.1 (2016), 25–46.

Fundings

8.–12.2018	Institut de Mathématiques de Bourgogne Institut Henri Poincaré Swiss Academy of Science Swiss Doctoral Program in Mathematics Swiss Mathematical Society University of Basel	7th swiss-french workshop in Algebraic geometry, Charmey (Switzerland), organised with Prof. P. Habegger, R. Terpereau
9.–13.1.2017	Institut de Mathématiques de Bourgogne Swiss Academy of Science Swiss Doctoral Program in Mathematics Swiss Mathematical Society University of Basel	6th swiss-french workshop in Algebraic Geometry, Charmey (Switzerland), organised with Prof. J. Blanc, A. Dubouloz, Prof. P. Habegger
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
4.–5.9.2014	Swiss Doctoral Program in Mathematics	13th Graduate Colloquium, University of Basel organised with Maria Fernanda Robayo funding: 1250.-CHF

Academic activities

8.–12.1.2018	7th swiss-french workshop in Algebraic Geometry, Charmey (Switzerland); organising with Ronan Terpereau (Dijon) and Prof. Philipp Habegger (Basel)	
14.9.2017	Member of thesis defence jury of Anne Lonjou, Université de Toulouse	
9.–13.1.2017	6th swiss-french workshop in Algebraic Geometry, Charmey (Switzerland); organised with Prof. J. Blanc (Basel), A. Dubouloz (Dijon) and Prof. P. Habegger (Basel), funded by Swiss Doctoral Program in Mathematics, Swiss Mathematical Society and University of Basel	
5.–16.9.2016	Cremona conference Basel 2016; organised with Prof. J. Blanc, Mattias Hemmig, Christian Urech; funded by Swiss Doctoral Program in Mathematics and University of Basel	
2.2016	Research stay at Centro de Matemática, Universidad de la República Uruguay; funded by antelope Basel	
2015	Member of antelope Basel	
9.2014–7.2016	Founder and organiser of graduate seminar <i>Bernoullis Tafelrunde</i> , University of Basel; organised and founded with Christian Urech	
4.–5.9.2014	13th Graduate Colloquium, University of Basel; organised with Maria Fernanda Robayo, funded by Swiss Doctoral Program in Mathematics	
2013–2016	Member of Swiss Doctoral Program in Mathematics; 2014–2016 Junior Council Member	
8.2010–1.2016	Teaching at Depart. Mathematics and Computer Science	

Invited talks

9.–13.4.2018	French-German Meeting in Complex Algebraic Geometry, Luminy (Marseille)	
12.-16.2.2018	Polynomial Rings and Affine Algebraic Geometry, Tokyo Metropolitan University	
23.1.2018	Oberseminar Algebra and Number theory, University of Cologne	
21.11.2017	Seminar Algebra und Geometry, University of Basel	
8.11.2017	Séminaire de topologie, géométrie et algèbre, Université de Nantes	
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, <i>The abelianisation of the real Cremona group.</i>	

- 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*.
- 13.11.2016 Séminaire de géométrie algébrique, Université 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 Ebner
- 2015 Workshops, trainings and coachings organised by antelope Basel
- 1.2015–9.2016 Assignment of tutorials to the assistants of the Dept. of Mathematics and Computer Science, University of 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 | enseignante-chercheur

Université de Toulouse | In charge of "Projet de Stage L3" (4 month project) de Pauline Lino Bras, spring 2017
Paul Sabatier

University of Basel | Teaching assistant

8.2010–9.2016 | During my phd:

- *Master courses:*

Projective Algebraic Curves and Surfaces I + II, 2015

- *Bachelor courses:*

Differential Geometry for scientists (Mathematische Methoden IV), spring 2014

Differential Geometry, spring 2013

Seminar for Gifted Highschool Students (Schülerseminar), autumns 2014–2016

During my bachelor / master:

- *Bachelor courses:*

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, University of Basel