

SUSANNA ZIMMERMANN

susanna.zimmermann@univ-angers.fr 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
- 2.2013–9.2016 PhD candidate supervised by Prof. J. Blanc, Dept. Mathematics and Computer Science, University of Basel.
8.9.2016: PhD defence, *summa cum laude*. Examinators: Prof. J. Blanc, Prof. I. Dolgachev, Prof. Y. Prokhorov; Thesis: *Compositions and relations in the Cremona groups*.
- 8.2008–1.2013 M.Sc. in Mathematics at University Basel (8.2011–1.2013). Thesis: *Geometry and Invariants of the Affine Group*, supervised by Prof. H. Kraft
B.Sc. in Mathematics at University of Basel (8.2008–8.2011)

Preprints

- [2] S. ASGARLI, K.-W. LAI, M. NAKAHARA, S. ZIMMERMANN: Biregular Cremona transformations of the plane. arXiv:1910.05302
- [1] C. URECH, S. ZIMMERMANN: Continuous automorphisms of Cremona groups. arXiv:1909.11050

Publications

- [10] J. BLANC, S. LAMY, S. ZIMMERMANN: Quotients of higher dimensional Cremona groups. Acta Math. (to appear)
- [9] S. ZIMMERMANN: The real plane Cremona group is a non-trivial amalgam. Annales de l'Institut Fourier (to appear)
- [8] S. LAMY, S. ZIMMERMANN: Signature morphisms from the Cremona group over a non-closed field. JEMS (to appear).
- [7] C. URECH, S. ZIMMERMANN: A new presentation of the plane Cremona group. Proc. of the AMS, vol 147, no 7, 2019, 2741–2755.
- [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., vol.55, no.4 (2018), 681–712.
- [4] J. BLANC, S. ZIMMERMANN: Topological simplicity of the Cremona groups. Amer. J. Math. 140 (2018), no. 5, 1297–1309.
- [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.

Prices

2020 Médaille Bronze du CNRS

Fundings

1.2020–12.2021	Région Pays de la Loire	Projet Etoiles montantes, 110 900€
2.2019–11.2019	CNRS	projet PEPS 2019
2018–2011	Projet "jcc" ANR	Project FIBALGA
2.2018–11.2018	CNRS	projet PEPS 2018 with E. Floris (Université de Poitiers) and R. Terpereau (Université de Bourgogne)
10.2016–8.2017	Swiss National Science Foundation	Early.Postdoc-Mobility grant No. P2BSP2_168743
2015	Equal Opportunity Office University of Basel	Member of antelope program; Funding of research stay in 2.2016 at Centro de Matemática Universidad de la República Uruguay

Organised academic events

- 14.–17.1.2020 9th swiss-french workshop in Algebraic Geometry, Charmey (Switzerland), with R. Terpereau (Université de Bourgogne) and Prof. P. Habegger (University of Basel)
- 20.–21.5.2019 FIBALGA à Angers, with Ronan Terpereau (Université de Bourgogne)
- 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)
- 3.–4.12.2018 Journée réelle du CHL, Angers
- 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 *Bernoullis Tafelrunde*, 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

- 2019 Member of recruitment jury, Université de Nice
- since 2018 INSMI parity referent at LAREMA
- 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
- 2014–2016 Junior Council Member of Swiss Doctoral Program in Mathematics
- 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 mini-courses

- 6.–10.1.2020 Winter school on Cremona groups, Cuernavaca, Mexico, *mini-course*
- 9.–13.12.2019 Algebraic Geometry in Auckland, Auckland, *mini-course*

- 26.–30.11.2018 Rencontre Del Duca, Rennes; mini-course *The Cremona groups are not simple*
 17.–19.5.2017 Rencontre del Duca, Université de Rennes 1, *mini course: The group of birational transformations of the real projective plane.*

Invited talks

- 22.–26.6.2020 Conference Foliation theory and complex geometry, CIRM
 25.–29.5.202 Congrès de la SMF, Nancy
 12.–15.5.2020 Birational geometry conference 2020, Lausanne
 20.–23.1.2020 Real and Enumerative Geometries, Nantes
 21.11.2019 Algebraic Geometry seminar, Oslo, *Birational permutations of the projective plane*
 22. 10.2019 Séminaire Arithmétique et Géométrie Algébrique, Orsay, *Quotients de groupes des transformations birationnelles*
 15.10.2019 Séminaire géométrie algébrique, Lille, *Morphismes de signature des groupes de Cremona*
 17.–20.6.2019 Discrete groups and Moduli, Nagoya (Japan)
 2.5.2019 Séminaire Arithmétique et géométrie algébrique, Strasbourg
 1.–4.4.2019 Higher dimensional complex geometry, Saarland University, *Non-Simplicity of Cremona groups*
 20.–22.3.2019 Women in Homotopy Theory and Algebraic Geometry II, Freie Universität Berlin, *Birational symmetries of projective spaces*
 15.3.2019 London Geometry and Topology Seminar, Imperial College, *Higher dimensional Cremona groups*
 28.2.–1.3.2019 GLEN Seminar, Manchester, *Quotients of plane Cremona groups*
 23.1.2019 Seminar Algebraic and Complex Geometry, Saarland University, *Relations between Sarkisov links*
 5.–9.11.2018 Constructions and obstructions in birational geometry, Edinburgh, *Quotients of Cremona groups*
 30.–2.10.2018 workshop Fano varieties and their automorphisms, Loughborough University, *Abelian quotients of the Cremona groups in higher dimension*
 12.10.2018 Séminaire Géométrie, Université de Lyon 1, *Quotients des groupes de Cremona*
 6.–7.9.2018 Rencontre La Rochelle–Bordeaux–Poitiers, *Les groupes de Cremona ne sont pas simples.*
 18.–22.2018 Subgroups of the Cremona groups, Oberwolfach, *The Cremona groups are not simple.*
 9.–13.4.2018 French-German Meeting in Complex Algebraic Geometry, Luminy (Marseille), *Signature morphisms from the Cremona group.*
 12.–16.2.2018 Polynomial Rings and Affine Algebraic Geometry, Tokyo Metropolitan University, *Birational transformations of the affine plane over perfect fields.*
 23.1.2018 Oberseminar Algebra and Number theory, University of Cologne, *Birational maps of the plane over a perfect field.*
 21.11.2017 Seminar Algebra und Geometry, University of Basel, *Signature morphisms of the Cremona group of the plane.*
 8.11.2017 Séminaire de topologie, géométrie et algèbre, Université de Nantes, *Des morphismes du groupe de Cremona réel.*
 12.10.2017 Séminaire Groupes, Algèbre et Géométrie, Université de Poitiers, *Des morphismes du groupe de Cremona du plan.*
 26.–30.6.2017 Edge Days, University of Edinburgh, *Birational transformations of the plane over a non-closed field.*

- 10.4.2017 Séminaire Algèbre et géométries, Fourier Institut Grenoble, *Sous-groupes algébriques du groupe de Cremona*.
- 17.3.2017 Basel-EPFL Meeting, *Algebraic subgroups of the real Cremona group*.
- 2.3.2017 Séminaire de Géométrie algébrique, Université de Paris Diderot, Institut de Mathématiques Jussieu-Paris Rive Gauche, *Les symétries réelles du plan projectif*.
- 9.12.2016 Oberseminar: Algebra, Zahlentheorie und algebraische Geometrie, University of Freiburg, *The Cremona group of the real and the complex plane*.
- 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 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)