

# ANNA BOT

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Website

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## ACADEMIC INTERESTS

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Birational geometry, in particular real forms, dynamical degree and Coble surfaces.

## EDUCATION

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### University of Basel

- Ph.D., Mathematics (expected graduation: April 2024).
- Project funded by the Swiss National Science Foundation Grant “Geometrically ruled surfaces”, 192217.
- Advisor: Jérémy Blanc.

### ETH Zurich

- M.Sc., Mathematics (2019), Master thesis: *On automorphisms of rational surfaces*.
- B.Sc., Mathematics (2018), Bachelor thesis: *Catenary rings*.

## PUBLICATIONS AND PREPRINTS

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5. **The ordinal of dynamical degrees of birational maps of the projective plane.** To appear in *Comptes Rendus. Mathématique*. ([arXiv version](#)).
4. **Relative forms of real algebraic varieties and examples of quasi-projective surfaces with algebraic moduli of real forms** (joint with Adrien Dubouloz). Submitted. ([arXiv version](#))
3. **Real forms of some Gizatullin surfaces and Koras-Russell threefolds** (joint with Jérémy Blanc, Pierre-Marie Poloni). *Publicacions Matemàtiques* 67.2 (2023): 851-890. ([article](#)).
2. **A smooth complex rational affine surface with uncountably many real forms.** To appear in *Annales scientifiques de L'École normale supérieure*. ([arXiv version](#)).
1. **Real forms on rational surfaces.** *Ann. Sc. Norm. Super. Pisa Cl. Sci.* (5), Vol. XXIV (2023), 1301-1326. ([arXiv version](#)).

## INVITED TALKS

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30. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms.* CUSO Graduate Colloquium, Université de Fribourg, November 22-24, 2023.
29. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms.* Research School in Real Algebraic Geometry, SISSA and IGAP, Trieste, October 30 - November 2, 2023.
28. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms.* Journées GAGC, Université de Poitiers, October 18-20, 2023.

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<sup>1</sup>Updated January 28, 2024

27. *Realisation of birational maps*. AGGITatE, University of Essex, June 19-21, 2023.
26. *Survey on real forms*. Conference on Birational geometry and regulous functions, Le Croisic, June 5-9, 2023.
25. *Realisation of birational maps*. Rencontre ERC Groups of Algebraic Transformations, Université de Rennes 1, May 22-26, 2023.
24. *Survey on real forms*. Workshop FIBALGA 2023, Université de Montpellier, March 23-24, 2023.
23. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Séminaire Algèbre et géométries, Institut Fourier, Grenoble, March 20, 2023.
22. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Algebraic Geometry and Commutative Algebra Seminar, University of Notre Dame, January 25, 2023.
21. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Complex Analysis, Dynamics and Geometry Seminar, University of Michigan, January 19, 2023.
20. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Algebra and Number Theory Seminar, Pennsylvania State University, Januar 12, 2023.
19. *Realisation of birational maps*. Séminaire de Géométrie Complexe, Université de Toulouse, November 17, 2022.
18. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Oberseminar Algebraische Geometrie, Saarland University, November 9, 2022.
17. *Smooth complex rational affine surface with uncountably many real forms*. Bern-Fribourg Graduate Seminar, University of Berne, October 27, 2022.
16. *Realisation of birational maps*. Basel-Dijon-EPFL Joint Seminar, Université de Bourgogne, October 6-7, 2022.
15. *The ordinal of dynamical degrees of birational maps of the projective plane*. Summer school COMB in CAMB, University of Cambridge, September 5-9, 2022.
14. *The ordinal of dynamical degrees of birational maps of the projective plane*. Conference in enumerative, real and birational geometry, Le Croisic, June 6-10, 2022.
13. *Dynamics in birational geometry*. Geometry graduate colloquium, ETH, May 19, 2022.
12. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Journées de géométrie algébrique réelle, Université de Rennes 1, May 12-13, 2022.
11. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Cohomological Methods in Geometry, University of Freiburg, April 6-8, 2022.
10. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Affine Algebraic Geometry Meeting, Saitama University (online), March 2-3, 2022.
9. *A smooth complex rational affine surface with uncountably many real forms*. Groups, Arithmetic & Algebraic Geometry Seminar, EPFL, December 2, 2021.
8. *A smooth complex rational affine surface with uncountably many nonisomorphic real forms*. Iskovskikh Seminar, Steklov Mathematical Institute (online), November 11, 2021.
7. *Real Forms on Complex Varieties*. Bernoullis Tafelrunde, University of Basel, November 1, 2021.
6. *Une surface affine rationnelle complexe lisse possédant une infinité non dénombrable de formes réelles non isomorphes*. Séminaires systèmes dynamiques et géométrie, Université Angers, October 19, 2021.

5. *A smooth complex rational affine surface with uncountably many real forms*. 10th swiss-french workshop in Algebraic Geometry, Charmey, September 20-24, 2021.
4. *Real forms on rational surfaces*. Recent Developments in Algebraic Geometry, Arithmetic and Dynamics Part 1, National University of Singapore, June 10-18, 2021.
3. *Real forms on rational surfaces*. Seminar Algebra and Geometry, University of Basel, May 11, 2021.
2. *Blowing up and automorphisms on a blow-up*. Bernoullis Tafelrunde, University of Basel, October 10, 2019.
1. *Automorphisms of rational surfaces*. Seminar Algebra and Geometry, University of Basel, September 17, 2019.

## ACADEMIC SERVICE

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- Reviewer of an ANR proposal (2022).
- Reviewer for Annali Scuola Normale Superiore

## ORGANISATION

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### Conferences

- Co-organiser of conference “Birational geometry and dynamics” at the SwissMAP Research Station (Les Diablerets, planned for June 30 - July 5, 2024). [Poster](#).

### Seminars

- Co-organiser of *Seminar Algebra and Geometry*, research seminar (2021-2023). [Seminar website](#).
- Co-organiser of *Bernoullis Tafelrunde*, graduate student seminar (2022/2023). [Seminar website](#).

## TEACHING EXPERIENCE

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### University of Basel

- Teaching Assistant, Algebraic Geometry II (Spring 2023, Fall 2022).
- Teaching Assistant, Algebra (Fall 2023, Fall 2021).
- Teaching Assistant, Numerics on the Computer (Spring 2022, Spring 2021).
- Teaching Assistant, Linear Algebra (Fall 2020).

### ETH Zurich

- Teaching Assistant, Linear Algebra (Fall 2016, Spring 2017).

## OUTREACH

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- Organisation of “A slice of ...”, an evening event for the department on diversity and inclusion (2023-).
- Introducing a primary school student to Algebraic Geometry (2021/2022).

## AWARDS

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- Admitted to the Swiss Study Foundation (2017).
- Award for teaching excellence awarded by the VMP (student association of mathematics and physics student at ETH) (2016).