

Sokratis Zikas - Curriculum Vitae

IMPA - Instituto de Matemática Pura e Aplicada
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Personal Information

Date of Birth: July 1, 1993
Place of Birth: Kerkyra, Greece
Place of Residence: Rio de Janeiro, Brazil
Citizenship: Greek

Academic Career

08/2024 - present **Post-doc**, IMPA, Brazil
09/2022 - 08/2024 **Post-doc**, University of Poitiers, France
09/2018 - 08/2022 **Ph.D in Mathematics**, University of Basel, Switzerland
Thesis title: *Birational transformations of threefolds*
under the supervision of Prof. J  r  my Blanc [↗](#).
09/2016 - 07/2018 **M.Sc in Mathematics**, University of Ioannina, Greece
Specialization: Mathematics (Analysis - Algebra - Geometry)
Thesis title: *Birational Geometry of Algebraic Surfaces*
under the supervision of Prof. Stavros Papadakis [↗](#).
09/2011 - 08/2016 **B.Sc in Mathematics**, University of Ioannina, Greece.

Visiting Positions

02/2024 **Visiting Researcher**, IMPA institute, Rio de Janeiro, Brazil
Host: Carolina Araujo

Research Interests

Birational Geometry, Groups of birational transformations, Terminal extractions, Group actions on varieties

Language Skills

Greek (native), English (C2), German (B2), French (beginner)

Institutional Responsibilities

Teaching Activities:

Spring 2022	<i>Transformation groups</i>	Spring 2020	<i>Group Cohomology</i>
Winter 2021	<i>Linear Algebra I</i>	Winter 2019	<i>Linear Algebra I</i>
Spring 2021	<i>Differential Geometry</i>	Spring 2019	<i>Linear Algebra II</i>
Winter 2020	<i>Algebraic Geometry I</i>	Winter 2018	<i>Linear Algebra I</i>

Working Groups Organized:

Winter 2023	<i>“The Kawamata-Morrison cone conjecture for surfaces”</i>
Spring 2023	<i>“Hilbert Schemes of Lines and Conics of Fano 3-folds”</i>
Spring 2022	<i>“Moduli Spaces and GIT”</i>
Winter 2021	<i>“Groups acting on varieties”</i>
Spring 2020	<i>“The Sarkisov Program (cont.)”</i>
Winter 2019	<i>“Intersection Theory”</i>
Spring 2019	<i>“The Sarkisov Program”</i>

Research Output

Publications and Preprints:

- “On Guizatulin’s Problem for quartic surfaces of Picard rank 2”**, 2024
(joint with Carolina Araujo and Daniela Paiva, [arXiv:2410.08415](#))
- “Umemura Quadric Fibrations and Maximal Subgroups of $\mathrm{Cr}_n(\mathbb{C})$ ”**, 2024
(joint with Enrica Floris, [arXiv:2402.05021](#))
- “Sarkisov Links with centres space curves on smooth cubic surfaces”**, 2023
(in *Publicacions Matemàtiques* [↗](#), [arXiv:2012.04049](#))
- “Rigid birational involutions of \mathbb{P}^3 and cubic threefolds”**, 2023
(in *Journal de l’École Polytechnique* [↗](#), [arXiv:2111.04711](#))
- “Connected algebraic subgroups not lying in a maximal one”**, 2022
(joint with Pascal Fong, in *Comptes Rendus Mathématique* [↗](#), [arXiv:2201.09682](#))

In preparation:

- “On terminal weighted blowups of projective space”*
(joint with Tiago Duarte Guerreiro and Erik Paemurru)

Research Funding

“Cremona groups of higher rank via the Sarkisov program”

Funding of CHF104'000 by the Swiss National Science Foundation, 2022-2024, Grant nr P500PT_211018

Dissemination

Selected talks:

- June 2023 **AGGITatE 2023**, *Equivariant geometry of quadric bundles and maximal subgroups of Cremona groups*, University of Essex, Colchester, UK [↗](#).
- Mar 2023 **ANR FRACASSO - Workshop in Bordeaux**, *Unbounded connected algebraic subgroups of $\text{Bir}(C \times \mathbb{P}^n)$* , Institute de Mathématiques de Bordeaux, Bordeaux, France [↗](#).
- Mar 2022 **ANR FIBALGA - Workshop in Poitiers**, *Rigid birational involutions of \mathbb{P}^3* , Laboratoire de Mathématiques et Applications, Université de Poitiers, France [↗](#).
- Jan 2022 **ANR FanoHK - Thematic workshop in Dijon**, *Rigid birational involutions of projective 3-space and cubic 3-folds*, Institut de Mathématiques de Bourgogne, Dijon, France [↗](#).

Seminars:

- Oct 2023 **Séminaire de Géométrie Complexe**, *Equivariant geometry of quadric bundles and maximal subgroups of Cremona groups*, Institut de Mathématiques de Toulouse, France [↗](#).
- Apr 2022 **Oberseminar Algebraische Geometrie, Saarbrücken**, *Rigid birational involutions of \mathbb{P}^3 and cubic 3-folds*, Universität des Saarlandes, Germany [↗](#).
- Nov 2021 **Basel-Dijon-EPFL Seminar**, *Rigid birational involutions of \mathbb{P}^3* , University of Basel, Switzerland [↗](#).