

# ALEXANDRU IOSIF

alejandroiosif@gmail.com

- BORN** 14th of May, 1989; Ploiești, România.
- EDUCATION** Master in Mathematics High School Education at Universidad Autónoma de Madrid.
- PhD in Mathematics at Otto-von-Guericke-Universität Magdeburg (2016 – 2019)  
Thesis: *Algebraic methods for the study of multistationarity in mass-action networks*.  
Advisors: Carsten Conradi (HTW-Berlin) and Thomas Kahle (OvGU-Magdeburg).
- Internship at Laboratorio de Óptica de la Universidad de Murcia (Sep – Oct 2015).
- Master in Mathematics at Universidad Complutense de Madrid (2014 – 2015).
- Bachelor in Physics at Universidad Complutense de Madrid (2008 – 2014).
- CURRENT POSITION** Mathematics instructor at the Saint Louis University – Madrid Campus (since September 2021)
- TEACHING AT UNIVERSITY** I have been teaching the following courses (at SLU – Madrid Campus):  
Fall 2021 Calculus I and Advanced Mathematics for Engineers  
Spring 2022 Calculus I, College Algebra (2 courses), and Advanced Mathematics for Engineers (1/3 of a group);  
Fall 2022 Calculus I, Precalculus, and Principles of Mathematics.
- EMPLOYMENT** Postdoctoral fellow at the Joint Research Center for Computational Biomedicine, UKA RWTH Aachen University (Mar 2019 - Aug 2020).
- Research assistant at Otto-von-Guericke-Universität Magdeburg (Sep 2017 – Feb 2019).
- Research assistant at Hochschule für Technik und Wirtschaft Berlin (Mar 2016 – Aug 2017).
- Maths & Science Tutoring at Academia Las Rozas (Summers of 2011, 2014 and 2015).
- PUBLICATIONS** D. Grigoriev, A. Iosif, H. Rahkooy, T. Sturm, A. Weber, *Efficiently and Effectively Recognizing Toricity of Steady State Varieties*, Math. Comput. Sci. (2020).
- C. Conradi, A. Iosif, T. Kahle, *Multistationarity in the space of total concentrations for systems that admit a monomial parametrization*, Bull. Math. Biol. 81 (10): 4174-4209 (2019).
- INVITED TALKS** *Toric biochemical systems:*  
INRIA Saclay, Paris. Feb 24, 2020.
- Sistemas bioquímicos tóricos:*  
V Congreso de Jóvenes Investigadores – Castelló 2020. Jan 27 – 31, 2020.
- Dynamical systems with toric positive steady states:*  
Workshop on Algebraic and Analytical Methods for Dynamical Systems with Applications to Reaction Networks, Aachen. Apr 30, 2019.
- The computation of discriminants in mass-action networks:*  
2017 SIAM Conference on Applied Algebraic Geometry, Atlanta. Aug 3, 2017.

## TALKS

*Euclides, Descartes y Sturm: la búsqueda de las raíces reales de un polinomio. ¿Demasiado anticuados para contarlos en el aula de Secundaria?*

Seminario Didáctica de las Matemáticas, Universidad Autónoma de Madrid, July 15, 2022.

*The Sturm discriminant of a linear section of a positive toric variety:*

Jíbiri Seminar IV, Zaragoza, June 1 – 3, 2022.

*Dynamical systems with toric positive steady states:*

SYMBIONT Project meeting, Paris, Apr 4 – 5, 2019.

*Mass-action networks with the isolation property:*

- First BYMAT Conference, Madrid. May 7 – 9, 2018.

- Graduate Student Meeting on Applied Algebra and Combinatorics, Osnabrück. Mar 23, 2018.

*The computation of discriminants in mass-action networks:*

Meeting of the European SIAM Chapters 2017, Prague. Aug 29, 2017.

*Astronomía de posición:*

Curso de Introducción a la Astronomía, ASAAF UCM, Madrid (2009 and 2011).

## EXPERIENCE

Visting the Department of Specific Didactics at Autonoma University of Madrid  
May – July 2022

Supervisor of an undergradutate student within the Programm DAAD RISE Germany  
OvGU Magdeburg, May–Aug 2018.

Fellows representative in the Management Board of the DFG-RTG “MathCore”  
OvGU Magdeburg, Sep 2017 – Sep 2018.

Co-organizer of the *Reading group in syzygies*

OvGU Magdeburg & MPI MIS Leipzig, Oct 2017 – Feb 2018.

Co-organizer of the *Reading group in coding theory*

OvGU Magdeburg, May – June, 2017.

Secretary of the Astronomy Club ASAAF

ASSAF UCM, Universidad Complutense de Madrid, 2008.

## CODE

<https://bitbucket.org/alexandru-iosif/>

## CONFERENCES

Congreso Internacional ”Ceci n’est pas une école: Educación, digitalización y pandemia”  
Madrid, June 10 – 11, 2021.

V Congreso de Jóvenes Investigadores  
Castelló, Jan 27 – 31, 2020.

SIAM Conference on Applied Algebraic Geometry  
Bern, July 9 – 13, 2019.

MEGA+MEGAR 2019

Madrid, June 17 – 22, 2019.

Macaulay2 Workshop 2018  
Leipzig, June 4 – 8, 2018.

Workshop “Numerical methods for algebraic curves”  
Rennes, Feb 19 – 23, 2018.

Open Source Computer Algebra Research (OSCAR)  
Leipzig, Dec 11 – 12, 2017.

Algebra meets Numerics: Condition and Complexity  
Berlin, Nov 6 – 7, 2017.

SIAM Conference on Applied Algebraic Geometry  
Atlanta, July 31 – Aug 4, 2017.

Applied Macaulay2 tutorials  
Atlanta, July 27 – 29, 2017.

Foundations of Computational Mathematics  
Barcelona, 10 – 19 July, 2017.

Reading Group on Real Algebraic Geometry  
Leipzig, July 3 – 7, 2017.

Interactions between algebra and the sciences  
Leipzig, May 27, 2017.

Summer School on Multigraded Algebra and Applications  
Moieciu, Aug 17 – 24, 2016.

Summer School on Algebra, Statistics and Combinatorics  
Helsinki, June 27 – July 2, 2016.

Multiple Zeta Values, Multiple Polylogarithms and Quantum Field Theory  
Madrid, 7 – 11 Oct de 2013.

Quantum theory’s influences on topology, analysis and geometry  
Copenhagen, May 20 – June 1, 2013.

Lorentzian Homogeneous Spaces  
7 – 8 Mar, 2013

Recent Progress in Real Complexity and Computation  
16 – 20 July, 2012.

ONLINE  
EDUCATION

The Ancient Greeks  
Coursera, Wesleyan University. 2016.

Pintura Europea: Leonardo, Rembrandt, Goya  
edX, UC3MX. 2015.

El enlace químico y las interacciones moleculares

edX, UPValenciaX. 2015.

LANGUAGES      Romanian (native), Spanish (fluent), English (C1), French (basic), Portuguese (basic), German (basic).

TECHNICAL  
SKILLS      Emacs, Latex, M2, Maple, Mathematica, Basic Python, Online teaching.