

# Lucas Mioranci

## CONTACT INFORMATION

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## EDUCATION

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- **PHD IN MATHEMATICS** at the **University of Illinois at Chicago**  
Chicago, IL, United States, 2019 - expected May 2024  
Advisor: Izzet Coskun
- **MASTER IN MATHEMATICS** at **ICMC - USP**  
São Carlos, Brazil, Feb 2019 - Jun 2019  
Advisor: Daniel Levcovitz
- **BACHELOR IN MATHEMATICS** at **ICMC - USP**  
São Carlos, Brazil, 2015 - 2018

## RESEARCH

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I am an algebraic geometer interested in rational curves, hypersurfaces, algebraic hyperbolicity, and birational geometry. My research concentrates on the algebraic hyperbolicity of hypersurfaces in homogeneous varieties and normal bundles of rational curves on varieties in projective space.

### Papers:

- Algebraic hyperbolicity of very general hypersurfaces in homogeneous varieties (submitted)
- Normal bundles of rational normal curves on hypersurfaces  
To appear in Michigan Mathematical Journal

## TEACHING

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- Instructor in MATH 211 - Emerging Scholars Workshop for Calculus III - UIC, Spring 2024
- Teaching Assistant in MATH 210 - Calculus III - UIC, Spring 2024
- Instructor in MATH 109 - College Algebra Workshop - UIC, Fall 2023
- Instructor in SEMW MATH 090 - Summer Workshop - UIC, Summer 2023
- Teaching Assistant in MATH 210 - Calculus III - UIC, Spring 2023
- Instructor in MATH 104 - Mathematical Reasoning Workshop - UIC, Fall 2022
- Teaching Assistant in MATH 105 - Mathematical Reasoning - UIC, Fall 2022
- Instructor in SEMW MATH 090 - Summer Workshop - UIC, Summer 2022
- Teaching Assistant in MATH 170 - Calculus for Life Science - UIC, Spring 2022
- Instructor in MATH 090 - Intermediate Algebra - UIC, Fall 2021
- Teaching Assistant in MATH 165 - Business Calculus - UIC, Spring 2021
- Teaching Assistant in MATH 118 - Mathematical Reasoning - UIC, Fall 2020
- Worked as a Course Builder building the structure of online courses - UIC, Summer 2020
- Teaching Assistant in MATH 121 - Precalculus - UIC, Spring 2020

- Teaching Assistant in MATH 125 - Linear Algebra for Business - UIC, Fall 2019

## HONOURS AND AWARDS

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- Herbert Alexander Award, UIC, 2023
- Damber Singh Tomer and Meena Singh Tomer International Scholarship, UIC, 2021
- MSCS Teaching Assistant Award, UIC, 2020
- Best Student Award, ICMC, USP, 2015 - 2018
- Bronze Medal at OBM - Brazilian Mathematics Olympiad, 2018
- Bronze Medal at OBM - Brazilian Mathematics Olympiad, 2017
- Honorable Mention at OBM - Brazilian Mathematics Olympiad, 2016
- Honorable Mention at OBM - Brazilian Mathematics Olympiad, 2015

## POSTERS AND TALKS

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- Poster Presentation: "Algebraic hyperbolicity of very general hypersurfaces in homogeneous varieties"  
Higher Dimensional Algebraic Geometry: James' 60th Conference  
University of California, San Diego, CA, January 2024
- Invited Talk: "Algebraic hyperbolicity of very general hypersurfaces in homogeneous varieties"  
JMM 2024 - AMS Contributed Paper Session on Algebraic Geometry, and Related Topics  
San Francisco, CA, January 2024
- Poster Presentation: "Algebraic hyperbolicity of very general hypersurfaces in homogeneous varieties"  
WAGS-WUSTL Fall 2023 - Western Algebraic Geometry Symposium  
Washington University in St. Louis, November 2023
- Invited Talk: "Algebraic hyperbolicity of very general hypersurfaces in homogeneous varieties"  
UIC Algebraic Geometry Seminar  
UIC, Chicago, October 2023
- Poster Presentation: "Algebraic hyperbolicity of very general hypersurfaces in homogeneous varieties"  
MAGNTS - Midwest Arithmetic Geometry and Number Theory Series  
University of Michigan, Ann-Arbor, October 2023
- Poster Presentation: "Normal Bundles of Rational Normal Curves on Hypersurfaces"  
WAGS-UCR Fall 2022 - Western Algebraic Geometry Symposium  
University of California, Riverside, November 2022
- Poster Presentation: "Normal Bundles of Rational Normal Curves on Hypersurfaces"  
MAGNTS 2022 - Midwest Arithmetic Geometry and Number Theory Series  
UIC, Chicago, October 2022
- Summer course taught on Algebraic Surfaces  
ICMC, USP Summer School  
Online, February 2022
- Invited Talk: "Retas são pontos, círculos são pontos. O importante é contar"  
Seminário de Coisas Legais  
ICMC, USP São Carlos, May 2019
- Invited Talk: "Elementary Techniques in Number Theory"  
XXI Simpósio de Matemática para a Graduação  
ICMC, USP São Carlos, August 2018
- Poster Presentation: "Groups Representations and Burnside's Theorem"  
31 Colóquio Brasileiro de Matemática  
IMPA, Rio de Janeiro, August 2017

## PARTICIPATION IN EVENTS

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- Higher Dimensional Algebraic Geometry: James' 60th Conference  
University of California, San Diego, CA, January 2024
- JMM 2024 - Joint Mathematics Meetings  
San Francisco, CA, January 2024
- WAGS-WUSTL Fall 2023 - Western Algebraic Geometry Symposium  
Washington University in St. Louis, November 2023
- MAGNTS - Midwest Arithmetic Geometry and Number Theory Series  
University of Michigan, Ann-Arbor, October 2023
- International Conference on Rationality and Hyperbolicity  
University of Notre Dame, June 2023
- Around Complex Geometry  
UIC, Chicago, April 2023
- Syzygies and Regularity  
UIC, Chicago, April 2023
- JMM 2023 - Joint Mathematics Meetings  
Boston, January 2023  
Supported by AMS Graduate Student Travel Grant
- AMS Short Course: Polynomial systems, homotopy continuation and applications  
Boston, January 2023
- WAGS-UCR Fall 2022 - Western Algebraic Geometry Symposium  
University of California, Riverside, November 2022
- MAGNTS 2022 - Midwest Arithmetic Geometry and Number Theory Series  
UIC, Chicago, October 2022
- MAGGC 2022 - Midwest Algebraic Geometry Graduate Conference  
UIC, Chicago, August 2022
- 6th GTSS - Geometry-Topology Summer School  
Online, August 2021
- 6th Heidelberg Laureate Forum - Young Researcher  
Heidelberg, Germany, September 2018
- XXI Simpósio de Matemática para a Graduação  
ICMC, USP São Carlos, August 2018  
Invited Talk: "Elementary Techniques in Number Theory"
- International Congress of Mathematicians  
Rio de Janeiro, Brazil, August 2018  
Worked as a volunteer
- XX Simpósio de Matemática para a Graduação  
ICMC, USP São Carlos, August 2017  
Short Presentation: "Linear Representations of Finite Groups"
- 31 Colóquio Brasileiro de Matemática  
IMPA, Rio de Janeiro, August 2017
- 24th Brazilian Algebra Meeting  
Diamantina, Minas Gerais, Brazil, August 2016

## SUMMER SCHOOLS

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- CMND - Workshop on rationality and hyperbolicity  
University of Notre Dame, June 2023

- ICMC, USP Summer School - Short Course on Vector Bundles and Coherent Sheaves on the Projective Line  
Online, January 2023
- ICMC, USP Summer School - Taught a short course on Algebraic Surfaces  
Online, February 2022
- PRIMA 2021 Summer School: Rational curves and moduli spaces in arithmetic geometry  
Online, August 2021
- IMPA Summer School - Introduction to Number Theory  
IMPA, Rio de Janeiro, 2018  
Supported by IMPA Summer Scholarship
- ICMC, USP Summer School - Functions in One Complex Variable  
ICMC, USP, São Carlos, 2017
- IMPA Summer School - Real Analysis  
IMPA, Rio de Janeiro, 2016  
Supported by IMPA Summer Scholarship

## SCIENTIFIC INITIATION SCHOLARSHIPS

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- Algebraic Number Theory, based on the first chapter of the book *Algebraic Number Theory*, J. Neukirch. Supported by FAPESP, Jul 2018, Dec 2018
- Algebraic Curves, based on the book *Algebraic Curves - An Introduction to Algebraic Geometry*, W. Fulton. Supported by FAPESP, Jun 2017- Jun 2018
- Group Representation Theory, based on the book *Linear Representations of Finite Groups*, J-P Serre. Supported by PICME, CNPq, Apr 2016 - Apr 2017
- Polynomials and Algebraic Computation, based on the book *Polinômios e Computação Algébrica*, S.C.Coutinho. Supported by PICME, CNPq, Mar 2015- Mar 2016

## LANGUAGES AND SKILLS

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PORTUGUESE	Native Language
ENGLISH	Fluent
C	
PYTHON	numpy, scipy, matplotlib, pandas, seaborn, sklearn
LATEX	
MATLAB	
MATHEMATICA	
MACAULAY 2	