

- Contact Information** Department of Mathematics,  
University of Maryland, College Park  
4176 Campus Dr, College Park, MD 20742  
email: vmastr@umd.edu
- Education** **University of Maryland, College Park, USA**  
Ph.D in Mathematics (August 2019 – Present)  
Advisor: Yanir A. Rubinstein  
Thesis title: Bergman kernels and Conjectures of Mahler, Bourgain, and Blocki
- University of Cambridge, UK**  
Part III of the Mathematical Tripos, October 2017 – June 2018
- National and Kapodistrian University of Athens, Greece**  
B.A. Mathematics October 2013 – July 2017 (4 years degree),  
GPA: 9.74/10
- Books** V. Mastrantonis, Y.A. Rubinstein, *An Introduction to Convex, Complex, and Differential Geometry via the Mahler conjectures*, in preparation, solicited by Amer. Math. Soc.
- Publications** V. Mastrantonis, Y.A. Rubinstein, *Two-dimensional Blocki,  $L^p$ -Mahler, and Bourgain conjectures*, preprint, 2024, arxiv: 2401.10992, to appear in Indiana Univ. Math. J.
- V. Mastrantonis, *A Santaló inequality for the  $L^p$ -polar*, preprint, 2024, arxiv: 2401.10836, to appear in Contemporary Mathematics, AMS.
- B. Berndtsson, V. Mastrantonis, Y.A. Rubinstein,  *$L^p$ -polarity, Mahler volumes, and the isotropic constant*, Analysis & PDE **17** (2024), 2179–2245.
- V. Mastrantonis, Y.A. Rubinstein, *The Nazarov proof of the non-symmetric Bourgain–Milman inequality*, Indiana Univ. Math. J. **73** (2024), 911–953.
- N. Georgakopoulos, V. Mastrantonis, V. Nestoridis, *Relations of the spaces  $A^p(\Omega)$  and  $C^p(\partial\Omega)$* , Results Math. **73**, 86 (2018), 13pp.
- V. Mastrantonis, C. Panagiotis, *Nowhere differentiable functions of analytic type on products of finitely connected planar domains*, Monatsh. Math. **187** (2018), 327–341.
- Preprints** V. Mastrantonis,  *$L^p$ -Legendre transforms and Mahler integrals*, in preparation, 2024.
- V. Mastrantonis, Y.A. Rubinstein *Python implementations for Mahler volumes, the isotropic constant, and the sliding algorithm*, in preparation, 2024.

## Awards

Ann G. Wylie Dissertation Fellowship Award, “Providing full-time support for the latter stages of dissertation writing”, University of Maryland, Fall 2024.

Gerondelis Foundation Graduate Grant, Summer 2024.

Mark E. Lachtman Award, University of Maryland, Spring 2024.

Graduate School Summer Research Fellowship, “Awarded for research support during summer”, University of Maryland, Summer 2023.

Mark E. Lachtman Award, University of Maryland, Spring 2023.

Outstanding Graduate Assistant Award, “Recognized among the top 2% of campus Graduate Assistants for the academic year”, University of Maryland, 2022–2023.

Hauptman Summer Research Award, “Awarded for research support during summer”, University of Maryland, Summer 2022.

George and Marie Vergottis Scholarship, “For studies at the University of Cambridge”, Cambridge Trust, 2017–2018.

Onassis Scholarship, “A competitive scholarship supporting my studies at the University of Cambridge”, Alexander S. Onassis Public Benefit Foundation, 2017–2018.

Pantias–Rallis Endowment Scholarship, “Awarded for excellent academic performance at the Department of Mathematics”, University of Athens, 2014–2015 & 2015–2016.

## Teaching experience

### Teaching assistant, University of Maryland

MATH 463: Complex Variables, Summer 2022 (grader)

MATH 241: Calculus III, Spring 2022 (teaching assistant)

MATH 730: Fundamental concepts of topology, Fall 2021 (grader)

MATH 436: Differential geometry of curves and surfaces, Fall 2021 (grader)

MATH 240: Linear algebra, Spring 2021 (teaching assistant)

MATH 241: Calculus III, Fall 2020 (teaching assistant)

MATH 241: Calculus III, Spring 2020 (teaching assistant)

MATH 141: Calculus II, Fall 2019 (teaching assistant)

Responsibilities included: Leading weekly discussion sessions, preparing and grading homework assignments and in-class worksheets, holding weekly office hours, grading exams, helping students with coursework.

## Outreach and broader impact

**Mentored** five undergraduate students over three years for the **Directed Reading Program** at the University of Maryland:

- Alejandro Escoto on “Geometric Flows in Python”, Fall 2023
- Brooke Guo on “The isoperimetric inequality from antiquity to Steiner”, Spring 2023
- Alejandro Escoto on “The de Rham cohomology”, Fall 2022
- Abdulrahman Alenazi on “The 2-dimensional Mahler conjecture”, Spring 2022
- Aryan Kaul on “The 2-dimensional Brouwer fixed point theorem”, Spring 2021

**Gave a talk** at the Interaction between Convex Geometry and Complex Geometry REU, University of Maryland, July 2024.

**Co-organized** Research Interactions Team on “Introduction to Complex Geometry” at University of Maryland, Spring 2020

**Mentored** four students on a paper I coauthored on nowhere differentiable functions within the course “Topics in Analysis”, University of Athens, Spring 2017

**Refereed** papers for Advances in Mathematics, International Mathematics Research Notices, and Mathematische Zeitschrift.

**Conference and Workshop Talks** [Midwestern Workshop in Geometric Analysis](#), Indiana University, October 2024.  
[Gothenburg Complex Geometry](#), Gothenburg, Sweden, August 2024.

[Recent Developments in Geometric Analysis](#), AMS Spring Eastern Sectional Meeting at Howard University, April 2024.

8-lecture graduate mini-course, University of Maryland, February–March 2024.

[Convex and Complex: Perspectives on Positivity in Geometry](#), Cetraro, Italy, November, 2022.

8-lecture graduate mini-course, University of Maryland, October–November 2021.

**Seminar Talks** [Analysis Seminar SAMPS](#), Athens, Greece, January 2025

[Measure Theory Seminar](#), Kent State University, March 2024.