

**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

**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

**Publications &  
Preprints**

V. Mastrantonis, Y. A. Rubinstein, *Two-dimensional Błocki,  $L^p$ -Mahler, and Bourgain conjectures*, preprint, 2024, arxiv: 2401.10992, submitted.

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, V. A. Rubinstein, *The Nazarov proof of the non-symmetric Bourgain–Milman inequality*, preprint, 2022, to appear in Indiana Univ. Math. J.

N. Georgakopoulos, V. Mastrantonis, V. Nestoridis, *Relations of the spaces  $A^p(\Omega)$  and  $C^p(\partial\Omega)$* . Results Math. **73**, 86 (2018).

V. Mastrantonis, C. Panagiotis, *Nowhere differentiable functions of analytic type on products of finitely connected planar domains*, Monatsh. Math. **187** (2018), 327–341.

**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)

**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

**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, while attending the undergraduate course “Topics in Analysis” supervised by professor Vassili Nestoridis, at the University of Athens, Spring 2017

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

**Conference and Seminar Invited Talks** *Mahler–Santaló inequalities: An overview*, in “Interaction between convex geometry and complex geometry” REU at UMD, Summer 2024.

*$L^p$ -polarity, Mahler volumes, and the isotropic constant*, in “Recent Developments in Geometric Analysis” AMS spring eastern sectional meeting at Howard University, April 2024

*$L^p$ -polarity, Mahler volumes, and the isotropic constant*, Measure theory seminar at Kent state University, March 5, 2024

*Affine isoperimetric inequalities*, 8-lecture mini-course at University of Maryland, February–March 2024

*On Gromov–Hausdorff convergence*, University of Maryland student complex geometry seminar, September 2023

*The Bergman kernel approach to the Bourgain–Milman inequality and  $L^p$ -Mahler functionals*, at “Convex and complex: Perspectives on positivity in geometry”, Cetraro, Italy, 31 October – 4 November 2022

*Santaló’s inequality in  $\mathbb{C}^n$  by complex interpolation*, University of Maryland student complex geometry seminar, October 2022

*The Bourgain–Milman inequality in convex geometry*, 8-lecture mini-course at University of Maryland, October – November 2021

**Scholarships and awards** Gerondelis foundation graduate grant

“Ann G. Wylie Dissertation fellowship award”, providing full-time support for one semester for the latter stages of dissertation writing, Fall 2024.

“Graduate School Summer Research Fellowship”, at the University of Maryland, supporting research during summer 2023.

“Mark E. Lachtman Award”, at the University of Maryland, Spring 2023

“Outstanding graduate assistant award” at the University of Maryland, for the academic year 2022–2023. The award conveys the honor of being recognized as among the top

2% of campus Graduate assistants in a given year.

“Hauptman Summer Research Award” for summer 2022, selected by the Department of Mathematics in CMNS at the University of Maryland, College Park.

[George and Marie Vergottis Scholarship](#), handled and administrated by the Cambridge Trust, to study at the University of Cambridge during the academic year 2017- 2018.

[Onassis Scholarship](#) a competitive award by the “Alexander S. Onassis Public Benefit Foundation” supporting my studies at the University of Cambridge during the academic year 2017- 2018.

Scholarship from Pantias-Rallis Endowment, handled and administered by University of Athens, for excellent academic performance in the Mathematics Department at the University of Athens in the academic years 2014-2015 and 2015-2016.