

SERGIO CRISTANCHO

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Languages: Spanish (native), English (fluent), German (waystage).

Citizenship: Colombian.

PERSONAL STATEMENT

I am a graduate student in Applied and Computational Mathematics at Princeton University. I obtained a master's degree in Mathematics and a bachelor's in both Mathematics and Physics at Universidad de los Andes in Colombia. I am interested in the intersection of algebraic geometry, convex geometry and combinatorics, and their applications.

EDUCATION

Universidad de los Andes	Bogotá, Colombia
B.S. in Mathematics,	2020
B.S. in Physics,	2021
M.S. in Mathematics,	2023

Princeton University	Princeton, New Jersey
P.h.D. in Applied Mathematics,	Ongoing

TEACHING EXPERIENCE

Teaching Assistant	
Real Analysis, Abstract Algebra, Enumerative Combinatorics	Universidad de los Andes
Applied Algebra, Honors Linear Algebra	Princeton University

RESEARCH

Papers:

- With Mauricio Velasco (2024). Harmonic Hierarchies for Polynomial Optimization. *SIAM Journal on Optimization* 2024 34:1, 590-615.

Conference Talks:

- Harmonic Hierarchies for Polynomial Optimization on Homogeneous Spaces. *SIAM Conference on Applied Algebraic Geometry 2023 (SIAM AG23)*, Eindhoven University of Technology, Eindhoven, the Netherlands, July 2023.
- Harmonic Hierarchies for Polynomial Optimization. *International Conference on Continuous Optimization (ICCOPT 2022)*, Lehigh University, Bethlehem, Pennsylvania, July 2022.
- Harmonic Hierarchies for Polynomial Optimization. *Conferencia Colombiana de Matemáticas Aplicadas e Industriales (MAPI 2)*, Sociedad Colombiana de Matemáticas, Medellín, Colombia, June 2022.