

Curriculum Vitae:

Antonios-Alexandros Robotis
Birthdate: Oct.02.95
Citizenship: EU, USA
Email: ar5116@columbia.edu

Employment:

- *NSF Postdoctoral Fellow*, Columbia University, Fall '25 - Spring '29
- *Research assistant in algebraic geometry*, Imperial College London, Fall '26 - Spring '27

Educational Background:

- Cornell University: Mathematics PhD – June '25
 - Thesis: *Limits of stability conditions and their geometry*, supervised by Daniel Halpern-Leistner; defended 04.17.25
 - SLMath, *Noncommutative Algebraic Geometry* Program Associate, Spring 2024
- NYU Courant Institute: M.S. in Mathematics – May '19
- U.C. Berkeley: Honors B.A. in Mathematics – June '17

Research:

- *A Looming of Phantoms* (with K. Kemboi, D. Krashen, T. Liu, Y. Liu, E. Mackall, S. Makarova, A. Perry, and S. Venkatesh), 2025, *in preparation*
- *Admissible subcategories of noncommutative curves*, 2025, *submitted*
- *Multiscale differentials and wonderful models* (with P. Devkota and A. Zahariuc), 2025, *To appear in Transactions of the American Mathematical Society*
- *The space of augmented stability conditions* (with D. Halpern-Leistner), 2024, *submitted*
- *Dimension theory of noncommutative curves* (with A. Bhaduri and I. Goldberg), 2024, *submitted*
- *Spaces of multiscaled lines with collision*, 2024
- *Stability conditions and semiorthogonal decompositions I: Quasi-convergence* (with D. Halpern-Leistner and J. Jiang), 2023, *submitted*

Awards and Honors:

- *NSF Mathematical Sciences Postdoctoral Research Fellow*, February '25
- *Cornell Conference Travel Grant* - Cornell University, February '25
- *Böttig Research Prize* - Cornell University, December '24
- *Leibniz Graduate Students Grant* - Forschungsinstitut Oberwolfach, Fall '24
- *Stephen della Pietra Fellowship* - MSRI/SLMath, Spring '24
- *Eleanor York Research Prize* - Cornell University, Fall '22
- *ICM Kovalevskaya Grant* - Summer '22
- *Early-career AMS-NSF-Simons-ICM Travel Grant* - Summer '22.
- *Hutchinson Fellowship* - Cornell University, Summer '20

Professional Activities:

- Organizer of Postdoc Algebraic Geometry Seminar, Columbia University, Fall '25
- Reviewer at zbMATH Open (December '23 - Present)
- Organized SLMath program associate seminar with Eliana Tolosa Villarreal (Spring '24)

- Referee for *Mathematische Zeitschrift*, *Advances in mathematics* (quick opinion)

Other Activities:

- Co-Founder and Organizer of Cornell Directed Reading Program : Spring '20 - Spring '25
Students Mentored:
 - Ritwick Bhargava (now a PhD student at University of Michigan) (Spring 2020-Spring 2023) topics: *commutative algebra, scheme theory, smooth manifolds, Lie groups and representation theory, toric varieties*
 - Alex Ni (Spring 2022) topic: *smooth manifolds*
 - Andrii Nykyforchyn (Fall 2023) topic: *smooth manifolds*
 - Julian Turner (Fall 2024) topic: *Riemann surfaces and algebraic geometry*
- Berkeley Engineers and Mentors - outreach program volunteer (Spring 2014, Fall 2014, Spring 2015)
- Math Stack Exchange

Teaching Experience:

- Teaching Assistant and Grader, Cornell University, Courses: *Multivariable calculus, Manifolds and differential forms, Linear algebra, Introduction to Analysis, Honors introduction to analysis, Applicable algebra (computational algebraic geometry), Applied complex analysis* (Fall 2019 - Spring 2025)
- Graduate mentor, Cornell Summer program for undergraduate research (SPUR), Summer 2021
- Instructor of record, NYU, Math 140 - *Linear algebra* (Summer 2018)
- Teaching Assistant and Grader, NYU, Courses: *Abstract Algebra, Honors Abstract Algebra II, Number Theory, Calculus I* (Spring 2018 - Spring 2019)
- Private Tutor at Cambridge Coaching, NYC (Fall 2017 - Spring 2019)

Invited Talks:

- *School and Workshop on Derived Category*, Yonsei University, Seoul, South Korea, Lecture series, 12.15.25 - 12.19.25
- *Valley geometry Seminar*, UMass Amherst, Amherst, MA, 12.05.25,
- *Algebraic geometry seminar*, University of Georgia, Athens, GA, 11.10.25
- *Michael Zhao Memorial Student Colloquium*, Columbia University, New York, NY, 10.30.25
- *Algebraic geometry seminar*, Cornell University, Ithaca, NY, 10.24.25
- *Informal mathematical physics seminar*, Columbia University, New York, NY, Lecture series: 09.29.25, 10.06.25, 10.13.25
- *Derived and noncommutative enthusiasts (DANCE) seminar*, Virtual, 06.23.25, recording
- *Algebraic geometry seminar*, Columbia University, New York, NY, 04.18.25
- *Algebraic geometry seminar*, University of Utah, Salt Lake City, Utah, 04.08.25
- *Enumerative geometry, representation theory, and physics*, Kavli IPMU, Tokyo, Japan, 03.03.25 - 03.07.25
- *Geometry, physics, and representation theory seminar*, Northeastern University, Boston, MA, 02.20.25
- *Iowa geometry and topology seminar*, University of Iowa, Iowa City, IA, 12.04.24
- *Longitudinal algebra and geometry open online seminar (LAGOON)*, Virtual, 10.30.24
- *Algebraic geometry seminar*, UPenn, Philadelphia, PA, 09.16.24
- *Algebra seminar*, Cornell University, Ithaca, NY, 09.13.24
- *Derived categories and moduli spaces*, UCSB, Santa Barbara, CA, 05.01.24 - 05.04.24
- *M-seminar*, Kansas State University (Virtual), 04.10.24, recording
- *Algebraic geometry seminar*, Universidad de los andes (Virtual), 03.13.24
- *MSRI noncommutative algebraic geometry workshop*, Berkeley, CA, (poster), 02.02.24

Conferences and workshops:

- *School and Workshop on Derived Category*, Yonsei University, Seoul, South Korea, 12.15.25 - 12.19.25
- *American Institute of Mathematics Workshop: Wall-crossing: techniques and applications*, Virtual, 09.15.25-09.19.25,
- *Enumerative geometry, representation theory, and physics*, Kavli IPMU, Tokyo, Japan, 03.03.25 - 03.07.25
- *Hyperkähler Varieties, Derived Categories, and Moduli Spaces* - Columbia University, 02.07.25 - 02.09.25
- *Algebraic Geometry and Noncommutative Projective Varieties* - Oberwolfach Research Institute for Mathematics, Oberwolfach, 09.22.24 - 09.27.24
- *Moduli of meromorphic quadratic differentials* - Simons Centre, Stony Brook, NY, 06.03.24 - 06.07.24
- *Derived categories and moduli spaces* - UCSB, Santa Barbara, CA, 05.01.24 - 05.04.24
- *Recent developments in noncommutative algebraic geometry* - SLMATH, Berkeley, CA, 04.08.24 - 04.12.24
- *Introductory Workshop: Noncommutative algebraic geometry* - SLMATH, Berkeley, CA, 02.05.24 - 02.09.24
- *AGNES: Algebraic Geometry Northeastern Series* - UPenn, 10.13.23 - 10.15.23
- *Summer School on Higher Structures in Algebra and Geometry* - Sophus Lie Centre, Nordfjordeid, 08.13.23 - 08.18.23
- *Derived Categories, Moduli Spaces, and Counting Invariants* - Imperial College, 07.03.23 - 07.07.23
- *Mathematics Research Community Program in Derived Categories, Arithmetic, and Geometry* - Java Center, NY 06.04.23 - 06.10.23
- *AGNES: Algebraic Geometry Northeastern Series* - SUNY Stony Brook, 04.28.23 - 04.30.23.
- *Categorical Methods in Moduli Theory* - UPenn, 04.07.23 - 04.09.23.
- *Quivers, Clusters, Moduli, and Stability* - Oxford, 01.09.23 - 01.13.23.
- *AGNES: Algebraic Geometry Northeastern Series* - UMass Amherst, 11.18.22 - 11.20.22.
- *Moduli Spaces and Stability Conditions* - CERM, Levico Terme, Italy, 05.06.22 - 06.10.22.
- *Derived Categories and Moduli Spaces* - Cornell University, 04.29.22 - 05.01.22.
- *Binghamton University Graduate Conference in Algebra and Topology* - SUNY Binghamton, 11.04.19 - 11.05.19.
- *AGNES: Algebraic Geometry Northeastern Series* - Brown University, 09.21.18 - 09.23.18.

Languages:

- English
- Greek
- French (Advanced)
- Spanish (Beginner)
- German (Beginner)