

Alejandro Ovalle

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- Education** **Since 05.2026** *Ph.D., Mathematics: Algebraic Geometry, University of Hannover.*
Project: Smoothings from log resolutions and applications in enumerative geometry.
Supervised by Dr. Tim Gräfnitz
- 10.2023 - 02.2026** *M.Sc., Mathematics: Algebra and Geometry, University of Bonn.*
Thesis: "Enumerative geometry of K3 surfaces: BPS and stable pair invariants".
Supervised by Prof. Richard Thomas
- 10.2020 - 09.2023** *B.Sc., Mathematics, University of Bonn.*
Thesis: "Formulae for smooth cubic surfaces: quadruples of points and twisted cubics".
Supervised by Prof. Daniel Huybrechts
- 02.2014 - 12.2019** *B.Sc., Physics, Universidad Nacional de Colombia.*
Thesis: "Gravity as a Chern-Simons theory in (2+1)-dimensions".
Supervised by Prof. Eduardo Rodriguez
- Research interests** Enumerative algebraic geometry, moduli problems, derived categories.
- Teaching and Research** **11.2025 - 03.2026** Research Internship: Interactions between enumerative and tropical geometry, Max Planck Institute - MiS, Nonlinear Algebra Group.
- 04.2024 - 09.2025** Teaching Assistant, University of Bonn: Algebraic geometry II, Algebraic geometry I and Commutative algebra.
- 10.2021 - 09.2022** Teaching Assistant, University of Bonn: Linear algebra I, Analysis I.
- Selected talks** Nonlinear Algebra Seminar, Max Planck Institute - MiS
Talk: "Enumerative geometry: Tropical correspondences and challenges"
- Algebraic curves Workshop, Max Planck Institute - MiS
Talk: "Curves on surfaces and intersection theory"
- Graduate Seminar of Master's thesis, University of Bonn
Talk: "BPS and stable pair invariants on K3 surfaces"
- Further academic activities** **07.01.2026 - 19.01.2026** Attendance to Workshop: Algebraic curves, Max Planck Institute - MiS
- 06.10.2025 - 10.10.2025** Attendance to ReMoLD School on Representations, motives and Langlands duality, University Duisburg-Essen
- 10.06.2025 - 12.06.2025** Attendance to Workshop: Curves on K3s and hyperkählers, University of Bonn
- 02.2025 - 07.2025** Organisation of reading seminar on Derived equivalences and Moduli, University of Bonn (More information on my website)
- 08.2024 - 01.2025** Organisation of reading seminar on Moduli spaces of stable sheaves, University of Bonn (More information on my website)
- 02.09.2024 - 06.09.2024** Attendance to Trieste Algebraic Geometry Summer School - Tropical geometry and moduli spaces of curves, ICTP

Honors

10.2023 - 02.2026 Full scholarship for Master's program from the Friedrich-Ebert-Stiftung.

More information: <https://www.fes.de/studienfoerderung>

12.2021 - 09.2023 Full scholarship for Bachelor's program from the Friedrich-Ebert-Stiftung.

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Further qualifications

Languages: Spanish (Native), English (C1), German (C1)