

Yannik Schuler

Algebraic Geometer & Mathematical Physicist

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Employment

Sep 2024 – **Postdoc**
Aug 2026 ETH Zürich, Department of Mathematics
In Rahul Pandharipande's research group

Mar 2024 – **Research Associate**
Aug 2024 University of Cambridge, DPMMS
In Dhruv Ranganathan's research group

Education

Nov 2020 – **PhD Mathematics**
May 2024 University of Sheffield
Supervisor: Andrea Brini
Thesis: "Topics in Gromov–Witten theory"

Apr 2017 – **MSc Physics**
Jun 2020 University of Bonn
Thesis: "Higher quantum Airy structures in two-dimensional topological gravity"
under supervision of Albrecht Klemm and Gaëtan Borot

Apr 2017 – **BSc Mathematics**
Mar 2019 University of Bonn
Thesis: "Representations of modulated quivers"
under supervision of Jan Schröer

Oct 2013 – **BSc in Physics**
Sep 2016 University of Bonn
Thesis: "Gravitational waves in view of the discovery at LIGO"
under supervision of Albrecht Klemm

Publications

Papers

- [1] Andrea Brini and Yannik Schuler. "On quasi-tame Looijenga pairs". *Commun. Num. Theor. Phys.* 17.2 (2023), pp. 313–341. DOI: 10.4310/CNTP.2023.v17.n2.a3. arXiv: 2201.01645 [math.AG].
- [2] Gaëtan Borot, Reinier Kramer, and Yannik Schuler. "Higher Airy structures and topological recursion for singular spectral curves". *Ann. Inst. Henri Poincaré Comb. Phys. Interact.* (2023). DOI: 10.4171/AIHPD/168. arXiv: 2010.03512 [math-ph].

Pre-Prints

- [3] Yannik Schuler. "Gromov–Witten theory of bicyclic pairs". 2024. arXiv: 2404.15412 [math.AG].

- [4] Michel van Garrel, Navid Nabijou, and Yannik Schuler. “Gromov–Witten theory of bicyclic pairs”. 2023. arXiv: 2310.06058 [math.AG].

Talks & Presentations

May 2024	Fanosearch Seminar, Imperial College, “Log vs Open Gromov–Witten theory”
May 2024	Calf meeting, University of Bath, “Tangents to the nodal cubic”
May 2024	Real and Logarithmic Enumerative Geometry, Oberwolfach, “Gromov–Witten theory and the refined topological string”
Apr 2024	Junior Geometry Seminar, University of Cambridge, “Tangents to the nodal cubic”
Apr 2024	Algebra Seminar, University of Edinburgh, “Gromov–Witten theory and the refined topological string”
Dec 2023	Algebraic Geometry and Moduli Seminar, ETH Zürich, “Gromov–Witten theory and the refined topological string”
Nov 2023	Mathematical Physics Seminar, HU Berlin, “Gromov–Witten theory from the fivefold perspective”
Nov 2023	Algebraic Geometry Seminar, University of Utrecht, “Equivariant Strings and Gromov–Witten theory”
Nov 2023	MAGIC seminar, Imperial College, “Equivariant Curves and Strings”
Oct 2023	Sheffield Geometry and Physics Seminar, University of Sheffield, “Tangents to the Nodal Cubic”
Jul 2023	LMS Summer School 2023, University of Sheffield, “From Counting Curves to Strings and back”
May 2023	Geometry and Mathematical Physics Seminar, University of Birmingham, “Gromov–Witten theory from the fivefold perspective”
Feb 2023	Algebraic Geometry Seminar, University of Cambridge, “The Log-Local-Open Correspondence”
Sep 2022	Conference TRSalento22, Otranto, Italy, Poster on “The Log-Local-Open Correspondence”
Jul 2022	K-theory, algebraic cycles and motivic homotopy theory, INI Cambridge, “The Log-Local-Open Correspondence”
Apr 2022	Mirrors, Moduli and M-theory in the Midlands – LMS Regional Meeting & Workshop, University of Birmingham, “Correspondences in enumerative geometry”

Teaching Experience

Apr 2020 – Sep 2023	Postgraduate Teaching Assistant University of Sheffield <ul style="list-style-type: none">• Demonstrator & Marker for “Core Foundation Mathematics” (Prep Course)• Demonstrator & Marker for “Mathematical modelling” (BSc)• Demonstrator & Marker for “Foundations of Pure Mathematics” (BSc)• Marker for “Advanced Calculus and Linear Algebra” (BSc)
Apr 2015 – Sep 2020	Teaching Assistant University of Bonn <ul style="list-style-type: none">• Demonstrator & Marker for “Mathematics for physicists” (BSc)• Demonstrator & Marker for “Mathematics for computer scientists” (BSc)• Demonstrator & Marker for “Theoretical classical mechanics” (BSc)• Demonstrator & Marker for “Theoretical electrodynamics” (BSc)• Demonstrator & Marker for “Theoretical statistical physics” (BSc)• Head Tutor for “General Relativity” (MSc)

Academic service

Referee for *Advances in Mathematics*
Reviewer for *zbMATH Open*

Scholarships

- Scholarship of the Bonn-Cologne Grad. School of Physics and Astronomy (Oct 2017 – Sep 2019)
- University of Sheffield Faculty of Science Scholarship (Nov 2020 – May 2024)

Languages

German mother tongue
English fluent
French basic knowledge

Interests

Climbing, Hiking, Taekwondo.