

Yannik Schüler

Algebraic Geometer & Mathematical Physicist

Email: yschuler1[at]sheffield[dot]ac[dot]uk

Web: yannikschuler.github.io

Employment

- Sep 2024 – Aug 2026 **Postdoc**
ETH Zürich, Department of Mathematics
In Rahul Pandharipande's research group
- Mar 2024 – Aug 2024 **Research Associate**
University of Cambridge, DPMMS
In Dhruv Ranganathan's research group

Education

- Nov 2020 – Jun 2024 **PhD Mathematics**
University of Sheffield
Supervisor: Andrea Brini
Thesis: "Topics in Gromov–Witten theory" (working title)
- Apr 2017 – Jun 2020 **MSc Physics**
University of Bonn
Thesis: "Higher quantum Airy structures in two-dimensional topological gravity"
under supervision of Albrecht Klemm and Gaëtan Borot
- Apr 2017 – Mar 2019 **BSc Mathematics**
University of Bonn
Thesis: "Representations of modulated quivers"
under supervision of Jan Schröer
- Oct 2013 – Sep 2016 **BSc in Physics**
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 Schüler. "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] Michel van Garrel, Navid Nabijou, and Yannik Schuler. "Gromov–Witten theory of bicyclic pairs". 2023. arXiv: 2310.06058 [math.AG].

Talks & Presentations

- 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
- 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
- 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.