Yannik Schüler

Algebraic Geometer & Mathematical Physicist

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Employment

Mar 2024 – **Sep 2024**	**Postdoc** University of Cambridge, DPMMS In Dhruv Ranganathan's research group

Education

Nov 2020 – **Jun 2024**	**PhD Mathematics** University of Sheffield Supervisor: Andrea Brini Current year of PhD: 3rd year
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: "Representation theory 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

Upcoming

Oct 2023	Sheffield Geometry and Physics Seminar, University of Sheffield
Nov 2023	Algebraic Geometry Seminar, University of Utrecht
Nov 2023	Mathematical Physics Seminar, HU Berlin
Dec 2023	Algebraic Geometry and Moduli Seminar, ETH Zürich

Past

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)

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.