

Curriculum Vitae of Robin Stoll

December 6, 2023

Personal Data

Date of Birth 1996-10-03
Nationality German
E-Mail Address `robin.stoll@math.su.se`

Education

Since 2019 Pursuing a PhD in Mathematics (Stockholm University).
Supervisors: Alexander Berglund and Gregory Arone
Oct 2019 M.Sc. in Mathematics (University of Bonn).
Master thesis: “A version of Goodwillie calculus for non-cubes” supervised by
Emanuele Dotto
Jul 2017 B.Sc. in Mathematics (University of Bonn).
Bachelor thesis: “An introduction to topological K-Theory and Snaith’s Theorem”
supervised by Urs Schreiber
Jun 2014 Abitur (Graf-Münster-Gymnasium Bayreuth)

Publications and Preprints

Preprints

- [1] Robin Stoll. *Functor calculus via non-cubes*. Preprint. 2022. arXiv: [2205.15880](#).

Articles

- [2] Robin Stoll. “The stable cohomology of self-equivalences of connected sums of products of spheres”. In: *Forum of Mathematics, Sigma* (2023). Accepted for publication. arXiv: [2203.15650](#).
- [3] Marvin Randig, Dierk Schleicher, and Robin Stoll. “Newton’s method in practice II: The iterated refinement Newton method and near-optimal complexity for finding all roots of some polynomials of very large degrees”. In: *Journal of Computational and Applied Mathematics* 437, 115427 (2024). DOI: [10.1016/j.cam.2023.115427](#). arXiv: [1703.05847](#).
- [4] Robin Stoll. “Modular operads as modules over the Brauer properad”. In: *Theory and Applications of Categories* 38.40 (2022), pp. 1538–1607. arXiv: [2202.02201](#).
- [5] Dierk Schleicher and Robin Stoll. “Newton’s method in practice: finding all roots of polynomials of degree one million efficiently”. In: *Theoretical Computer Science* 681 (2017), pp. 146–166. DOI: [10.1016/j.tcs.2017.03.025](#). arXiv: [1508.02935](#).

Other

- [6] Alexander Berglund and Robin Stoll. “Higher structures in rational homotopy theory”. In: *Higher Structures and Operadic Calculus*. Ed. by Bruno Vallette. Advanced Courses in Mathematics – CRM Barcelona. Lecture notes for a mini-course held online by Alexander Berglund at the CRM Barcelona in June 2021. To appear. Birkhäuser. arXiv: [2310.11824](https://arxiv.org/abs/2310.11824).

Grants

Nov 2023	Karlsruhe House of Young Scientists Aspirant Grant
Apr 2023	C. F. Liljevalch Jr. Travel Grant
Apr 2023	Knut and Alice Wallenberg Foundation Travel Grant

Research talks

Invited

Dec 2023	Research Seminar Algebra/Topology – University of Copenhagen
Dec 2022	Research Seminar Algebraic and Geometric Topology – Karlsruhe Institute of Technology
Nov 2022	Research Seminar Topology – University of Münster
Apr 2022	Research Seminar Algebra – Bowling Green State University and University of Toledo (online)

Contributed

Nov 2023	Talk at the workshop “Spaces of Manifolds: Algebraic and Geometric Approaches” – Banff
Jun 2023	Gong show talk at the conference “Homotopy: fruit of the fertile furrow” – INI Cambridge
Sep 2022	Gong show talk at the “European Autumn School in Topology” – Utrecht
Jul 2022	Contributed talk at the “Young Topologists Meeting” – Copenhagen
Jul 2022	Short communication at the ICM sectional workshop “Geometry and Topology” – Copenhagen
Apr 2022	Junior participant talk at the research program “Higher algebraic structures in algebra, topology and geometry” – IML Stockholm
Sep 2019	Gong show talk at the “European Autumn School in Topology” – Utrecht

Conferences, Workshops, and Summer Schools

Organized

Jul 2021	Young Topologists Meeting – Stockholm (online)
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Invited

Jul 2024	Workshop “Topologie” – Oberwolfach
Nov 2023	Workshop “Spaces of Manifolds: Algebraic and Geometric Approaches” – Banff

Participated

Jul 2023	Workshop “Algebraic K-theory of spaces” – Regensburg
Jun 2023	Homotopy: fruit of the fertile furrow – INI Cambridge
May 2023	GAP 2023 Homotopy Algebras and Higher Structures – IHP Paris
May 2023	Workshop “Homology of Configuration Spaces and related topics” – Paris Sorbonne
Oct 2022	Ib Fest – Copenhagen
Sep 2022	European Autumn School in Topology – Utrecht
Jul 2022	Young Topologists Meeting – Copenhagen

Jul 2022	ICM sectional workshop “Geometry and Topology” – Copenhagen
Jun 2022	Twinned Conference “Homotopy Theory with Applications to Arithmetic and Geometry” – MPIM Bonn
Jan – Apr 2022	Research program “Higher algebraic structures in algebra, topology and geometry” – IML Stockholm
Jun 2021	Masterclass “High dimensional cohomology of moduli spaces” – Copenhagen
Jun 2021	Workshop “Higher Structures and Operadic Calculus” – CRM Barcelona (online)
Dec 2019	Opening workshop of the “Operads, Calculus, and Homotopy theory methods in Topology” research project – Lausanne
Sep 2019	European Autumn School in Topology – Utrecht
Jul 2019	Young Topologists Meeting – Lausanne
Mar 2019	Bayerische Kleine AG about “The Landweber Exact Functor Theorem” – Bayreuth
Sep 2018	European Autumn School in Topology – Utrecht
Jul 2018	Young Topologists Meeting – Copenhagen
Jul 2017	Young Topologists Meeting – Stockholm
Sep 2016	Heidelberg Laureate Forum – Heidelberg
Jul 2015	Modern Mathematics International Summer School for Students – Bremen
Jul 2013	Modern Mathematics International Summer School for Students – Bremen

Teaching

Teaching assistant

At Stockholm University

Fall 2023	<i>Topology</i> held by Jonas Bergström
Summer 2023	<i>Abstract algebra</i> held by Gregory Arone
Fall 2022	<i>Topology</i> held by Alexander Berglund
Spring 2022	<i>Mathematics I</i> held by Håkan Granath and <i>Mathematics for Scientists II</i> held by Jonathan Rohleder
Summer 2021	<i>Foundations of Analysis</i> held by Alan Sola and <i>Abstract algebra</i> held by Gregory Arone

At the University of Bonn

Summer 2019	<i>Topology II</i> held by Daniel Kasprzycki
Winter 2018/19	<i>Topology I</i> held by Wolfgang Lück
Summer 2018	<i>Introduction to Geometry and Topology</i> held by Wolfgang Lück
Winter 2017/18	<i>Topology I</i> held by Stefan Schwede
Summer 2017	<i>Introduction to Geometry and Topology</i> held by Urs Schreiber
Winter 2016/17	<i>Analysis I</i> held by Barbara Niethammer

Other teaching

I taught the following week-long courses aimed at high-school and younger university students at summer schools of the Quod Erat Demonstrandum e.V. (also see below under “Other activities”):

Aug 2021	<i>Geometric group theory</i> , with Aras Ergus
Aug 2020	<i>Knot theory and practice</i> , with Aras Ergus
Aug 2017	<i>Introduction to Topology</i> , with Leon Hendrian

Other activities

Committees

Spring 2022	PhD hiring committee – Stockholm University
2022 – 2023	Natural Sciences Faculty Student Council – Stockholm University

Outreach

- Since 2011 Member of the Quod Erat Demonstrandum e.V., a Bavarian math club for high-school and university students
- 2015 – 2018 Supervisor and tutor at three summer schools for mathematically interested pupils from Bremen
- 2014 – 2015 Deputy chairman of the Quod Erat Demonstrandum e.V.
- Sep 2014 Organizer of the yearly summer school of the Quod Erat Demonstrandum e.V. in Sonthofen
- Dec 2013 Organizer of a seminar of the Quod Erat Demonstrandum e.V. in Kronach

Competitions

- Since 2015 Participation in the ICFP Programming Contest as part of team udfew in every year except for 2016
- Jul 2014 Participation in the International Tournament of Young Mathematicians as part of the team from Bremen, achieving third place
- 2006 – 2014 Various participations in German math, robotics, and computer science competitions for high-school students, with success at the federal state level