Moritz Schick

Curriculum Vitae

Department of Mathematics and Statistics
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Personal Details

DATE OF BIRTH	May 21st 1997
NATIONALITY	German

Education

SEPTEMBER 17TH 2024	**Submission of the dissertation** University of Konstanz
SINCE OCTOBER 2020	**Doctoral Studies in Mathematics**, University of Konstanz Project Title: *The Convex Cone of Sums of Squares plus Sums of Nonnegative Circuit Polynomials (SOS+SONC)* Supervisor: Prof. Dr. Salma Kuhlmann. Co–Supervisor: Asst. Prof. Dr. Mareike Dressler
JUNE 29TH 2020	**Master of Science in Mathematics** University of Konstanz Grade: Very Good with Distinction
JANUARY 2018 -JUNE 2020	**Master Program in Mathematics** University of Konstanz
JANUARY 29TH 2018	**Bachelor of Science in Mathematics** Grade: Excellent
OCTOBER 2014 -JANUARY 2018	**Bachelor Program in Mathematics** University of Konstanz
JUNE 2014	**Abitur** Fürstenberg Gymnasium, Donaueschingen
2006-2014	**Secondary School** Fürstenberg Gymnasium, Donaueschingen
2003-2006	**Elementary School** Lucian–Reich–Schule, Hüfingen (skipped 2nd grade)

Theses in Mathematics

DISSERTATION	**Sum of squares plus sums of nonnegative circuit polynomials**
MASTER THESIS	**Sum of Squares Representations of Convex Quarternary Quartics and Ternary Sextics** http://nbn-resolving.de/urn:nbn:de:bsz:352-2-c2ktrauqawrq1 Supervisor: Prof. Dr. Salma Kuhlmann Grade: Very Good
BACHELOR THESIS	**Surreale Zahlen (Surreal Numbers)** http://nbn-resolving.de/urn:nbn:de:bsz:352-2-2w9l1j8hhgzp3 Supervisor: Prof. Dr. Salma Kuhlmann Grade: Excellent

Teaching Activities and Research Experience

OCTOBER 2020 - SEPTEMBER 2023	**University of Konstanz** Teaching Assistant for the Courses: *Real Algebraic Geometry II, Real Algebraic Geometry I, Real Closed Fields and Integer Parts, Algorithmic Algebraic Geometry, Seminar on Number Theory, Algebra I, Linear Algebra I and II*
SEPTEMBER 2019 - FEBRUARY 2022	**HTWG Konstanz - University of Applied Sciences** Lecturer: *Mathematics I for Automotive Information Technology*
APRIL 2016 - SEPTEMBER 2021	**University of Konstanz** Class Tutor for the Courses: *Support Course in Mathematics, Analysis III, Algebra, Linear Algebra II, Linear Algebra I, Introduction Course for Freshman Students*
OCTOBER 2018 - MARCH 2019	**University of Konstanz** Course Instructor for the *Integra program of the German Academic Exchange Service (DAAD)*, private lessons for refugees in Mathematics and Physics
APRIL 2018 - SEPTEMBER 2018	**University of Konstanz** Research Associate: *Chair for Numerical Optimization*, supervised by Jun. Prof. Gabriele Ciaramella
2011 - 2014	**Fürstenber Gymnasium** Private Tutor under the *Program "Schwächen schwächen"*

Honors and Grants

JUNE 2024	**Travel Grant** financed by the *Doctoral Fund of the University of Konstanz*: 1857€
JUNE 2024	**Travel Grant** financed by the *European Mathematical Society*: 223€
JUNE 2023	**Travel Grant** financed by the *Doctoral Fund of the University of Konstanz*: 800€

NOVEMBER 2022	**Oberwolfach Leibniz Graduate Student**
AUGUST 2022	**Travel Grant** from the *European Women in Mathematics* (EWM): 400€
MAY 2022	**Travel Grant** financed by the *Doctoral Fund of the University of Konstanz*: 500€
MARCH 2022- DECEMBER 2024	**Doctoral Scholarship** provided by the *German Academic Scholarship Foundation* (Studienstiftung des deutschen Volkes) offering financing (declined) and mentorship (accepted)
SEPTEMBER 2021- - AUGUST 2024	**Doctoral Scholarship** provided by the University of Konstanz and the Federal State Baden–Württemberg under the *Landesgraduiertenförderungsgesetz* (LGFG, state law on funding for doctoral studies)
JANUARY 20TH 2021	**VEUK award for academic excellence** granted by the *Alumni Association of the University of Konstanz*: 200€
NOVEMBER 2020 - APRIL 2021	**Exposé Scholarship** provided the *German Academic Scholarship Foundation*: 6600€
OCTOBER 2017 - JUNE 2020	**Scholarship** provided by the *German Academic Scholarship Foundation* offering financing and mentorship (both accepted)
JUNE 2014	**Abitur Prize** granted by the *Deutsche Mathematiker–Vereinigung* (DMV, German Mathematical Society): award for outstanding highschool graduates
2017	**ITK–Student Award:** Prize for students with excellent performance in class and special engagement
2012/2013	**Gisela and Erwin Sick Award:** Prize for excellent performance in Mathematics and Natural Sciences
2008, 2011, 2012	**Sports Medal and Letter of Honor** granted by the *City of Donaueschingen*

Conferences and Taks

AUGUST 19TH-23RD 2024	**26th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2024):** Cambridge, United Kingdom Talk *"Quantitative relation of particular subcones of the cone of positive semidefinite forms"*
AUGUST 12TH-26TH 2024	**26th International Symposium on Mathematical 35th International Workshop on Operator Theory and its Applications** University of Kent, Canterbury, UK Talk *"Separation of the sums of squares cone and the sums of nonnegative circuit polynomials cone"*

March 11th-14th 2024	**MoPAT-24 – Moments and Polynomials: Applications and Theory** University of Konstanz, Germany Talk *"Quantitative relation of the cones of sums of squares and sums of nonnegative circuit polynomials"*
July 10th-14th 2023	**SIAM Conference on Applied Algebraic Geometry Applications and Theory** Eindhoven, The Netherlands Talk *"Deciding Membership in the Cone of Sums of Squares plus Sums of Nonnegative Circuit Polynomials"*
November 13th-17th 2023	**POP23 - Future Trends in Polynomial Optimization Optimization** LAAS-CNRS, Toulouse, France
June 12th-16th 2023	**25th Conference of the International Linear Algebra Society** Madrid, Spain Talk *"Nonnegative polynomials, sums of squares and sums of nonnegative circuits - a story of three cones"*
March 12th-17th 2023	**Real Algebraic Geometry with a View toward Koopman Operator Methods** Mathematisches Forschungsinstitut Oberwolfach (MFO, Oberwolfach Research Institute for Mathematics) Talk: *"The Minkowski Sum of Sums of Squares and Sums of Nonnegative Circuit Forms"*
February 14th-15th 2023	**Donau–Rhein-Modelltheorie-Seminar** Passau, Germany
September 21st-23rd 2022	**Geometry in Complexity and Computations** University of Konstanz, Germany
September 12th-16th 2022	**25th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2022):** Bayreuth, Germany Talk *"Combining the SOS and SONC cones - A Hilbert's 1888 Theorem analogue and further separation results"*
August 22th-26th 2022	**European Women in Mathematics (EWM) General Meeting** Aalto University, Espoo, Finland Talk *"The Minkowski sum of the SOS and SONC cones - an inner approximation of the PSD cone"*
June 20th-24th 2022	**Effective Methods in Algebraic Geometry (MEGA)** Kraków, Poland Poster Presentation *"Inner approximations of the PSD cone: What is SOS+SONC?"*
September 13th-17th 2021	**POEMA Learning Week 2** Toulouse, France

MARCH 1ST-7TH 2020	**Real Algebraic Geometry with a View Toward Hyperbolic Programming and Free Probability** Mathematisches Forschungsinstitut Oberwolfach (MFO, Oberwolfach Research Institute for Mathematics), Germany
JANUARY 25TH 2020	**Donau–Rhein Model Theory and Applications (DRMTA), 5th Meeting** University of Konstanz, Germany

Voluntary Work

SINCE WISE 2021/2022	**Department of Mathematics and Statistics** Department Council: *Doctoral Students' Representative*
SINCE MARCH 2021	**Faculty of Sciences** Doctoral Students' Convention: *Director*
WISE 2019/2020	**Department of Mathematics and Statistics** Appointment Committee: *Stochastic Analysis, Students' Representative*
WISE 2017/2018 - WISE 2019/2020	**Faculty of Sciences** Faculty Council: *Students' Representative*
SINCE WISE 2016/2017	**Department of Mathematics and Statistics** Study Commission: *Students' Representative*
SINCE 2015	**Department of Mathematics and Statistics** Student Council Mathematics and Statistics: *Member with different functions, such as Vice President, Webmaster, Representative in various committees*

Language and Computer Skills

GERMAN	Mother tongue
ENGLISCH	(C1)
SPANISH	(A2)
ITALIAN	(A1)
MATLAB	(very good)
PYTHON	(basic knowledge)
LATEX	(very good)
HTML	(basic knowledge)