

CURRICULUM VITAE PROF. DR. THORSTEN THEOBALD

PROFESSIONAL CAREER.

- since 2006: Professor (W3), Institute of Mathematics (Dept. of Mathematics and Computer Science), Goethe-Universität Frankfurt
2005 – 2006: Assistant Professor (C2), Dept. of Mathematics, TU Berlin
2004 – 2005: Feodor Lynen Fellow of the Alexander von Humboldt Foundation, Yale University
Spring 2004: Postdoctoral researcher, Mathematical Sciences Research Institute (MSRI), Berkeley
1997 – 2003: Postdoctoral researcher, Dept. of Mathematics, TU München

VISITING POSITIONS.

- 2019: Simons Institute for the Theory of Computing, Berkeley, Program *Geometry of Polynomials*
2018: Institute for Computational and Experimental Research in Mathematics (ICERM), Providence, Program *Nonlinear Algebra*
2018: Mittag-Leffler-Institute, Djursholm, Program *Tropical Geometry, Amoebas and Polytopes* (1 month)
2011: Mittag-Leffler-Institute, Djursholm, Program *Algebraic Geometry with a View Towards Applications* (1 month)
2010: Universidad de Cantabria, Santander, funded through the Alumni program of the Alexander von Humboldt Foundation (3 months)
2007: Institute for Mathematics and its Applications (IMA), Minneapolis, Program *Applications of Algebraic Geometry* (1 month)
Summer term 2004: Visiting professor, Dept. of Mathematics, Goethe-Universität Frankfurt
2001: Visiting scholar UC Berkeley, Dept. of Mathematics (3 months)

DEGREES.

- 2003 Habilitation in Mathematics, TU München, Habilitation thesis *New Algebraic Methods in Computational Geometry*. Mentor: Peter Gritzmann.
1997 Ph.D. (Dr. rer. nat.) in Computer Science, Universität Trier, DFG Graduate School “Mathematical Optimization”. Title of thesis *Transformation Techniques for Decision Diagrams in Computer-Aided Design*, supervised by Christoph Meinel.
1995 Diplom in Computer Science, Minor Mathematics, Goethe-Universität Frankfurt, Vordiplom in Mathematics (1992) and in Computer Science (1992). Title of thesis *Digital signatures via birational permutations*, supervised by Claus P. Schnorr.

AWARDS.

- 2003: Felix Klein Teaching Award, TU München
2000: Walther von Dyck Award for Early Career Scientists, TU München
1998: Finalist for the National Dissertation Award of the GI (German Association for Computer Science)
1991–1995: Fellow of the Studienstiftung des deutschen Volkes (German National Merit Foundation)
1990: National winner 8. Bundeswettbewerb Informatik (National Competition on Computer Science)

PH.D. STUDENTS.

Constantin Ickstadt: current

Jonas Ellwanger: current

Stephan Gardoll: Properties of conically stable polynomials and imaginary projections (2023)

Helen Naumann: AM/GM-based optimization: Geometry and generalizations (2021)

Thorsten Jörgens: Stability, hyperbolicity and imaginary projections of polynomials (2018)

Mareike Dressler: Sums of nonnegative circuit polynomials – Geometry and optimization (2018)

Kai Kellner: Positivstellensatz certificates for containment of polyhedra and spectrahedra (2015)

Christian Trabant: A new relaxation technique for polynomial optimization and spectrahedral geometry problems (2014)

Sadik Ilman: Nonnegative polynomials and sums of squares: Boundary structure, symmetries and sparsity (2014)

Timo de Wolff: On the geometry, topology and approximation of amoebas (2013)

Cordian Riener: Symmetries in semidefinite and polynomial optimization: Relaxations, combinatorics, and the degree principle (2011)

Kerstin Hept: Projections of tropical varieties and an application to small tropical bases (2009)

Reinhard Steffens: Mixed volumes, mixed Ehrhart theory and applications to tropical geometry and linkage configurations (2009)

≥ 70 student theses supervised (Bachelor, Master/Diplom, state examination)

POSTDOCS MENTORED. Hartwig Bosse (2007–2011), Martina Juhnke-Kubitzke (2012–2015), Lukas Katthän (2015–2019), Tomas Bajbar (2016–2018), Giulia Codenotti (2019–2022), Mahsa Sayyary Namin (2020–2023).

PROFESSIONAL ACTIVITIES (SELECTION).

since 2024 Principal Investigator within DFG SPP 2458 “Combinatorial Synergies” (Project *Sums of nonnegative circuit polynomials*, with T. de Wolff)

2021–2023 Deputy member of the Academic Senate of Goethe-Universität Frankfurt

2017–2019 Executive Chair of the MEGA conference series (Effective Methods in Algebraic Geometry)

2016–2023 Member of the Editorial Board of *SIAM J. Applied Algebra and Geometry*

since 2015 Member of the Editorial Board of *Beiträge zur Algebra und Geometrie*

2012–2021 Member of the Steering Committee of the Discrete Mathematics Section of the German Mathematical Society (DMV)

2012–2014 Dekan, Department of Mathematics and Computer Science, Goethe-Universität Frankfurt

since 2011 Member of the Advisory Board MEGA (Effective Methods in Algebraic Geometry)