

CURRENT STATUS	PhD Student at University of Konstanz, Germany Adviser Claus Scheiderer Fellow of the German National Academic Foundation (Studienstiftung - http://www.studienstiftung.de/en/)
DEGREES	• Doktor der Naturwissenschaften (PhD) expected April 2014 • Diploma Degree (grade 1.0) in Mathematics 2010 • Prediploma (grade 1.0) in Mathematics 2007 • Prediploma (grade 1.4) in Physics 2006
EDUCATION	• Universität Konstanz, PhD student 2010 - • Université Paris Diderot Paris VII, Exchange student 2008/09 • Universität Konstanz, Student 2004-2009
GRANTS	• Oct 2011 - Mar 2014: PhD fellowship with the German National Academic Foundation • Sep 2008 - Mar 2010: Student fellowship with the German National Academic Foundation
RESEARCH INTERESTS	Convex Algebraic Geometry: • Algebraic boundaries and duality • Positive polynomials and sums of squares • Matrix inequalities and moment relaxations
EXTENDED STAYS	• Aug 2012: Visiting Cynthia Vinzant at University of Michigan, Ann Arbor • Sep 2008-May 2009: Erasmus at Université Paris Diderot Paris VII
PUBLICATIONS	1. <i>Algebraic Boundaries of Convex Semi-algebraic Sets</i>, PhD thesis, in progress - expected 12/2013. 2. <i>Computing hermitian determinantal representations of hyperbolic curves</i>, with D. Plaumann, D. E Speyer, and C. Vinzant. Preliminary version, 2012 3. <i>Algebraic Boundaries of $SO(2)$-Orbitopes</i>, Discrete and Computational Geometry, 50 (1), 219-235, 2013. http://arxiv.org/abs/1108.2992 4. <i>Spectrahedra and a Relaxation of Convex, Semialgebraic Sets</i>, diploma thesis, Universität Konstanz, 2010 http://www.math.uni-konstanz.de/~sinn/thesis.pdf 5. <i>A Note on the Convex Hull of Finitely Many Projections of Spectrahedra</i>, with Tim Netzer, 2009 http://arxiv.org/abs/0908.3386

CONFERENCE TALKS

- SIAM Conference on Applied Algebraic Geometry, Fort Collins
Algebraic Boundaries of Convex Semi-algebraic Sets (2013)
- SIAM Conference on Applied Algebraic Geometry, Raleigh
The Algebraic Boundary of $SO(2)$ -Orbitopes (2011)
- Real Algebraic Geometry, Rennes, France
 $SO(2)$ -Orbitopes (2011)
- Real Algebra, Geometry and Convexity, Leipzig, Germany
 $SO(2)$ -Orbitopes (2011)

POSTER PRESENTATIONS

- Workshop Polynomial Optimisation, Isaac Newton Institute,
Cambridge, UK
Algebraic Boundaries of Convex Semi-algebraic Sets via Duality
(2013)
- Effective Methods in Algebraic Geometry (MEGA), Frankfurt
am Main, Germany
Hermitian Determinantal Representations of Hyperbolic Curves
(2013)

OTHER TALKS

- Oberseminar Real Geometry and Algebra, Konstanz, Germany
*The Algebraic Boundary of Convex Semi-algebraic Sets and
Dualities* (2012)
- Oberseminar Real Geometry and Algebra, Konstanz, Germany
 $SO(2)$ -Orbitope (2011)
- Summer School of the Studienstiftung des deutschen Volkes,
Görlitz, Germany
*Dualität von konvexen Funktionen und der Dualitätssatz von
Fenchel* (2009)
- Oberseminar Real Geometry and Algebra, Konstanz, Germany
Exakte Lasserre-Relaxierungen (2009)

CONFERENCES

- SIAM Conference on Applied Algebraic Geometry, Fort Collins, Colorado (2013)
- Workshop Polynomial Optimisation, Isaac Newton Institute, Cambridge, UK (2013)
- 26 European Conference on Operational Research, Rome, Italy (2013)
- Effective Methods in Algebraic Geometry (MEGA), Frankfurt am Main, Germany (2013)
- Structured Function Systems and Applications, Oberwolfach, Germany (2013)
- Mathematics, Algorithms and Proofs, Konstanz, Germany (2012)
- Emerging Developments in Real Algebraic Geometry, Magdeburg, Germany (2012)
- SIAM Conference on Applied Algebraic Geometry, Raleigh, North Carolina (2011)
- Real Algebraic Geometry, Rennes, France (2011)
- Combinatorial Methods in Algebraic Geometry and Commutative Algebra, Max-Planck-Institut für Mathematik in den Naturwissenschaften Leipzig, Germany (2011)
- Solving Polynomial Equations, Stockholm, Sweden (2011)
- Real Algebra, Geometry and Convexity, Leipzig, Germany (2011)
- BIRS Workshop Convex Algebraic Geometry, Banff, Canada (2010)
- Positivity, Valuations and Quadratic Forms, Konstanz, Germany (2009)
- Journées en l'honneur de Max Dickmann, Paris VI and VII, France (2007)

SUMMER SCHOOLS

- Polynomial Optimisation, Isaac Newton Institute, Cambridge, UK (2013)
- Algebraic Geometry for Applications, Atlanta, Georgia (2012)

TEACHING

Seminars

- Topics from Number Theory and Algebraic Geometry (2010/2011)
- **Supervision of theses** (joint with C. Scheiderer)
- Bachelor Thesis *Sekantenvarietäten projektiver Varietäten* by Mario Kummer (2011)
- Bachelor Thesis *Der Satz von Kronecker-Weber und Verallgemeinerungen* by Tim Kobert (2011)

Tutorials

- Linear Algebra I taught by Salma Kuhlmann (2011/2012)
- Algebraic Function Fields taught by Arno Fehm (2011)
- Number Theory taught by Claus Scheiderer (2010)
- Algebra taught by Claus Scheiderer (2009/2010)
- Complex Analysis taught by Reinhard Racke (2008)
- Algebra taught by Walter Baur (2007/2008)
- Linear Algebra II taught by Walter Baur (2007)
- Linear Algebra I taught by Walter Baur (2006/2007)

PERSONAL DATA

Nationality: German

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Universität Konstanz, 78457 Konstanz, Germany

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LANGUAGES

German (native language)

English (fluent)

French (very good)