Curriculum Vitae Johannes Schmitt, MSc

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Profile

- Currently PhD student in Mathematics
- Master of Science and Bachelor of Science in Mathematics
- Research interests: Algebraic geometry, representation theory, computer algebra, symplectic reflection groups, Cox rings, constructive invariant theory

Employment & Education

- **since April 2020:** Teaching assistant at TU Kaiserslautern
  Organisation and teaching of Bachelor's and Master's level example classes, occasional substitution of the lecturer in lectures
- **since November 2019:** PhD student in Mathematics at TU Kaiserslautern
  Supervisor: Prof. Dr. Ulrich Thiel
  Topic: Birational geometry and representation theory of some linear symplectic quotient singularities
- **September 2017 – October 2019:** Master of Science in Mathematics at TU Kaiserslautern
  Thesis: *On a Theorem of Eichler*, supervised by Jun.-Prof. Dr. Tommy Hofmann
  Specialisation: Algebra and number theory
- **February 2017 – September 2019:** Research assistant at TU Kaiserslautern
  Implementation of number theoretic algorithms in the software package Hecke, including algorithms for the computation of maximal orders, Picard groups, and locally free class groups.
- **October 2014 – August 2017:** Bachelor of Science in Mathematics at TU Kaiserslautern
  Thesis: *Lineare Algebra über Polynomringen*, supervised by Jun.-Prof. Dr. Tommy Hofmann
  Specialisation: Algebra, geometry and computeralgebra
- **June 2014:** Abitur ("high school degree")

Publications

- *On parabolic subgroups of symplectic reflection groups*, with G. Bellamy and U. Thiel, Glasgow Math. J., (2023), to appear
- *Towards the classification of symplectic linear quotient singularities admitting a symplectic resolution*, with G. Bellamy and U. Thiel, Math. Z. 300, 661–681 (2022)

Talks

- November 2022: *Computing Cox rings of linear quotients in OSCAR.* Nikolaus school "Computational Geometry" (Fraunhofer Institute ITWM, Kaiserslautern)
- September 2022: *Towards the classification of symplectic linear quotient singularities admitting a symplectic resolution.* Retreat of the SFB-TRR 191 (Ruhr-Universität Bochum)
- September 2022: *OSCAR case studies: Computing Cox rings of linear quotients in OSCAR.* Sixth annual conference of the SFB-TRR 195 (Eberhard Karls Universität Tübingen)
- August 2022: *Towards the classification of symplectic linear quotient singularities admitting a symplectic resolution.* A Day of Geometry in Glasgow (University of Glasgow)
- March 2022: *On the computation of Cox rings of minimal models of symplectic linear quotients.* Retreat of the SFB-TRR 195 (TU Kaiserslautern)
- December 2021: *On parabolic subgroups of symplectic reflection groups.* Nikolaus conference 2021 (RWTH Aachen University)
- September 2021: *Towards the classification of symplectic linear quotient singularities admitting a symplectic resolution.* Fifth annual conference of the SFB-TRR 195 (TU Kaiserslautern)

Grants

- June 2022: Research Support Fund of the Edinburgh Mathematical Society to support a research visit to the University of Glasgow in August 2022

Participation in workshops and summer schools

- November 2022: Nikolaus school "Computational Geometry" (Fraunhofer Institute ITWM, Kaiserslautern)
- September 2022: "Young Group theorists workshop: exploring new connections" (SwissMAP Research Station, Les Diablerets)
- April 2022: Research school "Symplectic singularities in geometry and representation theory" (CIRM Luminy)
- October 2021: Block seminar on representation theory and algebraic groups, IRTG of the SFB-TRR 195 (TU Kaiserslautern)

Teaching

- **Course assistance:**
  - Algebraic Geometry (Winter 22/23, in English)
  - Cryptography (Summer 21 and Summer 22, in English)
  - Commutative Algebra (Winter 20/21 and Winter 21/22, in English)
  - Computeralgebra (Summer 20, in English)

Further skills

- Advanced programming skills in the programming language Julia and the computer algebra system OSCAR (including major contributions), intermediate programming skills in the computer algebra systems Magma, GAP, and Singular