

Program

—— Monday, 28 September ——

14:00-14:30 WELCOME

14:30-15:10 **Strong approximation and descent**

Ulrich Derenthal [Leibniz Universität Hannover]

15:20-16:00 **Torsion Units in Integral Group Rings**

Leo Margolis [University of Stuttgart]

16:00-16:30 COFFEE BREAK

16:30-17:00 **Realizing graphs of genus 4 as skeleta of tropical space curves**

Simon Hampe [TU Berlin]

17:10-17:40 **Cap - Categories, algorithms, and programming**

Sebastian Gutsche & Sebastian Posur [TU Kaiserslautern & RWTH Aachen]

17:50-18:20 **Proving Kazhdan's Property (T) with Semidefinite Programming**

Tim Netzer [TU Dresden]

—— Tuesday, 29 September ——

09:00-09:50 **Dual graphs of projective schemes**

Matteo Varbaro [University of Genova]

10:00-10:30 **The Complexity of the Radical Word Problem for Binomial Ideals**

Stefan Toman [TU München]

10:30-11:00 COFFEE BREAK

11:00-11:40 **How to compute tropical varieties over the p -adic numbers?**

Thomas Markwig [TU Kaiserslautern]

11:50-12:30 **Chabauty without the Mordell-Weil group**

Michael Stoll [Universität Bayreuth]

12:30-14:30 LUNCH

14:30-15:10 **On the order of abelian varieties over finite prime fields**

Ute Spreckels [Carl von Ossietzky Universität Oldenburg]

15:20-16:00 **Computational aspects of rational Cherednik algebras**

Ulrich Thiel [University of Stuttgart]

16:00-16:30 COFFEE BREAK

16:30-17:00 **Computing automorphisms of graded algebras and Mori dream spaces**

Simon Keicher [Universität Tübingen]

17:10-17:40 **Software Development Within the SPP1489: Number Theory**

Claus Fieker [TU Kaiserslautern]

— Wednesday, 30 September —

09:00-09:40 Syzygies of curves via K3 surfaces

Michael Kemeny [HU Berlin]

09:45-10:25 Generalized Cox rings over nonclosed fields

Marta Pieropan [FU Berlin]

10:25-10:45 COFFEE BREAK

10:45-11:15 Computing representation zeta functions of unipotent groups

Tobias Rossmann [Universität Bielefeld]

11:20-11:50 The functional equation for L-functions of hyperelliptic curves

Michel Börner [Ulm University]

13:00 Departure to Kalkriese

19:00 Conference Dinner

Hausbrauerei Rampendahl

— Thursday, 01 October —

09:00-09:50 Software Development Within the SPP1489

Wolfram Decker [TU Kaiserslautern]

10:00-10:30 Computing integral Frobenius for Modular Abelian Surfaces

Tommaso Centeleghe [Universität Heidelberg]

10:30-11:00 COFFEE BREAK

11:00-11:40 Nilpotent associative algebras and coclass theory

Bettina Eick [TU Braunschweig]

11:50-12:30 Algorithmic isomorphism classification of modular cohomology rings of finite groups

Simon King [Friedrich-Schiller-Universität Jena]

12:30-14:30 LUNCH

14:30-15:10 Modular Techniques in Computational Algebraic Geometry

Janko Boehm [TU Kaiserslautern]

15:20-16:00 Better triangulations in Normaliz 3.0

Christof Söger [Universität Osnabrück]

16:00-16:30 COFFEE BREAK

16:30-17:00 Improved Parallel Gaussian Elimination for Groebner Bases Computations in Finite Fields

Christian Eder [TU Kaiserslautern]

17:10-17:40 Gröbner Bases over Algebraic Number Fields

Andreas Steenpaß [TU Kaiserslautern]

17:50-18:05 Dockerimage für Schwerpunktssoftware

Sebastian Gutsche [TU Kaiserslautern]

—— Friday, 02 October ——

09:00-09:50 Quadratic Chabauty

Steffen Müller [Carl von Ossietzky Universität Oldenburg]

10:00-10:30 Generalized Fermat equations $x^2 + y^3 = z^p$ - a progress report

Bartosz Naskrecki [Universität Bayreuth]

10:30-11:00 COFFEE BREAK

11:00-11:40 Generalizations of Maeda's Conjecture

Panagiotis Tsaknias [University of Luxembourg]

11:50-12:30 Novel techniques for group homology calculation, and applications to Bianchi modular forms

Alexander Rahm [NUI Galway]