

Scientific meeting of the DFG Forschergruppe "Classification of Algebraic Surfaces and Compact Complex Manifolds"

29.04.09 - 2.05.09 Schloss Mickeln, Düsseldorf

Program

Thursday, 30.04

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| 9 ⁴⁵ – 10 ³⁰ | Junjiro Noguchi | • A unicity theorem and Erdős problem for polarized semi-abelian varieties |
| 10 ⁵⁰ – 11 ¹⁰ | Michael Lönne | • Presentations of natural subgroups of the braid group |
| 11 ³⁰ – 11 ⁵⁰ | Michael Stoll | • The "Rational Box" Surface |
| 12 ¹⁰ – 12 ³⁰ | Jörg Winkelmann | • Nondegenerate Entire Curves in Surfaces |
| 12 ⁵⁰ – 13 ¹⁰ | Ingrid Bauer-Catanese | • Rationality questions for certain moduli spaces of curves |
| 15 ³⁰ – 15 ⁵⁰ | Philipp Gross | • The resolution property for singular surfaces |
| 16 ¹⁰ – 16 ³⁰ | Matteo Penegini | • The classification of isotrivial fibred surfaces with $p_g = q = 2$ |
| 16 ⁵⁰ – 17 ¹⁰ | Florian Schrack | • Algebraic Approximation of Kähler threefolds |
| 17 ³⁰ – | Meeting of the Forschergruppe | |

Friday, 01.05

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| 10 ⁰⁰ – 10 ²⁰ | Christian Liedtke | • Elliptic K3 surfaces with p-torsion section |
| 10 ⁴⁰ – 11 ⁰⁰ | Andreas Hoering | • Effective non-vanishing conjectures for projective threefolds |
| 11 ²⁰ – 11 ⁴⁰ | Shelly Garion | • Braid group actions, Hurwitz groups and Beauville surfaces |
| 12 ⁰⁰ – 12 ²⁰ | Evija Ribnere | • Representations of $\text{Aut}(F_n)$ |
| 12 ⁴⁰ – 13 ⁰⁰ | Thomas Eckl | • Geometric properties of strongly moving curves |
| 15 ⁰⁰ – 17 ⁰⁰ | Problem session and discussions | |

Abstracts

Michael Stoll. (Joint work with Damiano Testa)

The "rational box problem" asks whether there exists a rectangular 3-dimensional box, all of whose sides, face diagonals and long diagonals have rational (and positive) length. This problem is unsolved.

Solutions correspond to nontrivial rational points on a surface of general type, which is given as a complete intersection of four quadrics in 6-dimensional projective space. We determine the Picard group of its desingularization (the surface as given has 48 isolated singularities), in the hope that this might prove useful in future attempts to solve the original problem.