

Johannes Kepler Research Center Regensburg  
DFG Research Group „Algebraic Cycles and L-Functions“

## Workshop

### ARAKELOV THEORY AND ITS ARITHMETIC APPLICATIONS

February 22-26, 2010

Organizer: Prof. Dr. Klaus Künnemann, Regensburg

All lectures take place in room M 104 at the Math building  
Coffee will be served in room M 103

#### Monday, 22.2.2010

|               |                                                                              |
|---------------|------------------------------------------------------------------------------|
| 9.30 – 10.30  | Henri Gillet: Motivic weight complexes and nearby cycles                     |
| 10.30 – 11.15 | <i>Coffee break</i>                                                          |
| 11.15 – 12.15 | Christophe Soulé: Absolute successive minima                                 |
| 12.15 – 14.30 | <i>Lunch break</i>                                                           |
| 14.30 – 15.30 | Jean-Benoit Bost: Algebraization of vector bundles on arithmetic three-folds |
| 15.30 – 16.15 | <i>Coffee break</i>                                                          |
| 16.15 – 17.15 | Jose Ignacio Burgos Gil: The height of toric varieties                       |

#### Tuesday, 23.2.2010

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|---------------|------------------------------------------------------------------------|
| 9.30 – 10.30  | Walter Gubler: Tropical analytic geometry and the Bogomolov conjecture |
| 10.30 – 11.15 | <i>Coffee break</i>                                                    |
| 11.15 – 12.15 | Shouwu Zhang: Calabi theorem and algebraic dynamics                    |
| 12.15 – 14.30 | <i>Lunch break</i>                                                     |
| 14.30 – 15.30 | Robin de Jong: Height of Ceresa cycles and of Gross-Schoen cycles      |
| 15.30 – 16.15 | <i>Coffee break</i>                                                    |
| 16.15 – 17.15 | Emmanuel Ullmo: Rational points on Shimura varieties                   |

#### Wednesday, 24.2.2010

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|---------------|--------------------------------------------------------------------------|
| 9.30 – 10.30  | Jürg Kramer: Sup-norm bounds for automorphic forms and Eisenstein series |
| 10.30 – 11.15 | <i>Coffee break</i>                                                      |
| 11.15 – 12.15 | Anna v.Pippich: Elliptic Eisenstein series                               |
|               | <i>Lunch</i>                                                             |
| 15.30 – 17.00 | <i>Excursion</i>                                                         |
| 19.00         | <i>Conference dinner at Leerer Beutel</i>                                |

## Thursday, 25.2.2010

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|---------------|------------------------------------------------------------------------------------|
| 9.30 – 10.30  | Carlo Gasbarri: Geometric transcendence theory                                     |
| 10.30 – 11.15 | <i>Coffee break</i>                                                                |
| 11.15 – 12.15 | Huayi Chen: An Arakelov geometry approach to uniform estimation of rational points |
| 12.15 – 14.30 | <i>Lunch break</i>                                                                 |
| 14.30 – 15.30 | Atsushi Moriawaki: Zariski decompositions on arithmetic surfaces                   |
| 15.30 – 16.15 | <i>Coffee break</i>                                                                |
| 16.15 – 17.15 | Ulf Kuehn: Arithmetic intersection numbers of Fermat curves                        |

## Friday, 26.2.2010

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|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9.30 – 10.30  | Damian Rössler: On a conjecture of K-I Yoshikawa (joint work with V.Maillot)                                                                         |
| 10.30 – 11.15 | <i>Coffee break</i>                                                                                                                                  |
| 11.15 – 12.15 | Gerard Freixas: An application of the arithmetic Riemann-Roch theorem and the Jacquet-Langlands correspondance to modular and compact Shimura curves |
| 12.15 – 14.30 | <i>Lunch break</i>                                                                                                                                   |
| 14.30 – 15.30 | Dennis Erikson: On a metrized Deligne-Riemann-Roch isomorphism                                                                                       |