Workshop on

"Heights in Diophantine geometry, group theory and additive combinatorics"

organized by

Robert Tichy, Jeffrey Vaaler, Martin Widmer, Umberto Zannier

November 25 - 29, 2013

• Monday, November 25, 2013

09:30 **Opening & Registration**

10:00 – 10:45 **Emmanuel Breuillard** Uniform height lowers bounds on character varieties of reductive groups, and the uniform Tits alternative: part I

10:45-11:15 coffee break

11:15 – 12:00 **Gaël Rémond** *Generalized Lehmer problems*

 $12{:}00-14{:}00\ lunch\ break$

14:00 – 14:45 **Francesco Amoroso** On fields with the Bogomolov property

15:00 – 15:45 **Sinnou David** Points of small height on abelian varieties over function fields

 $15:45 - 16:15 \ break$

16:15 – 16:45 **Jeffrey Thunder** On sums of quotients of certain L-series over function fields

16:55 – 17:25 **Benjamin Klopsch** Zeta functions of groups - representations of arithmetic groups

• Tuesday, November 26, 2013

10:00 – 10:45 **Emmanuel Breuillard** Uniform height lowers bounds on character varieties of reductive groups, and the uniform Tits alternative: part II

10:45 - 11:15 coffee break

11:15 – 12:00 **Shou-Wu Zhang** Congruent number problem and L-functions

$12:00 - 14:00 \ lunch \ break$

14:00 – 14:45 **David Masser** Unlikely intersections for algebraic curves in positive characteristic

14:55 – 15:25 **Cameron Stewart** A refinement of the abc conjecture

15:35 – 16:05 **Rainer Dietmann** Quantitative versions of Hilbert's Irreducibility Theorem, and Probabilistic Galois Theory

 $16:05 - 16:30 \ break$

16:30 – 17:00 Christopher Frei Manin's conjecture for a singular del Pezzo surface over number fields

• Wednesday, November 27, 2013

10:00 – 10:45 **Emmanuel Breuillard** Uniform height lowers bounds on character varieties of reductive groups, and the uniform Tits alternative: part III

10:45 - 11:15 coffee break

11:15 – 12:00 **Jeffrey Vaaler** Schauder bases and heights of algebraic numbers

12:00 - 14:00 lunch break

14:00 – 14:45 **Yann Bugeaud** Root separation of integer polynomials

14:55 – 15:25 **Thái Hoàng Lê** Intersective polynomials and Diophantine approximation

15:35 – 16:05 Victor Beresnevich Badly approximable points on manifolds and Schmidt's conjecture in higher dimensions

Heurigen-Dinner

• Thursday, November 28, 2013

10:00 – 10:45 **Igor Shparlinski** Effective Hilbert's Nullstellensatz and Finite Fields

10:45 - 11:15 coffee break

11:15 – 12:00 **Pietro Corvaja** Perfect powers with few non-zero digits

12:00 - 14:00 lunch break

14:00 – 14:45 **Kálmán Győry** Effective bounds for the solutions of Diophantine equations over finitely generated domains

14:55 – 15:25 **Sara Checcoli** On the Northcott and Bogomolov properties for fields and groups

15:35 – 16:05 Lukas Pottmeyer Heights and Free Abelian Groups

 $16:05 - 16:30 \ break$

16:30 – 17:00 **Bobby Grizzard** *Relative Bogomolov extensions*

• Friday, November 29, 2013

09:45 – 10:30 **Yuri Bilu** Effective proof of the theorem of André on the complex multiplication points on curves

 $10:30-11:00 \ coffee \ break$

11:00 – 11:30 Walter Gubler Chambert-Loir's measures

11:40 – 12:10 **Patrice Philippon** Essential minima of toric varieties

All lectures take place in the ESI Boltzmann Lecture Hall