



International Conference:

## **Dynamical Numbers: Interplay between Dynamical Systems and Number Theory**

*Bonn, Germany, 20-24 July 2009*

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# **PROGRAMME**

## **Monday 20 July 2009**

09.30 - 10.00

**Conference opening**

Welcome by organizers

*Tea break*

10.30 - 11.30

**Marmi, Stefano** (Scuola Normale Superiore di Pisa, Italy & MPI, Germany)

**Roth type interval exchange maps**

11.40 - 12.40

**Vershik, Anatoly** (St.Petersburg Department of Steklov Institute of Mathematics, Russia)

**Arithmetic and dynamics**

*Lunch*

14.00 - 14.50

**Bainbridge, Matthew** (University of Chicago, US & MPI, Germany)

**Algebraically primitive Teichmüller curves in genus three**

15.00 - 16.00

**Deninger, Christopher** (Universität Münster & MPI, Germany)

**Noncommutative Mahler measures and Ljapunov exponents**

*Tea break*

16.30 - 17.30

**Marklof, Jens** (University of Bristol, UK & MPI, Germany)

**The asymptotic distribution of Frobenius numbers and flows on homogeneous spaces**

17.40 - 18.30

**Kontorovich, Alex** (Brown University, US)

**On representations of integers in thin subgroups of  $SL(2, \mathbb{Z})$**

## **Tuesday 21 July 2009**

09.00 - 09.50

**Bufetov, Alexander** (Rice University, US & MPI, Germany)

**Limit theorems for translation flows**

*Tea break*

10.30 - 11.30

**Glasner, Eli** (Tel-Aviv University, Israel & MPI, Germany)

**A topological lens for a measure-preserving system**

11.40 - 12.40

**Schmidt, Klaus** (University of Vienna, Austria & MPI, Germany)

**Mahler measure, a dynamical number**

*Lunch*

14.00 - 14.50

**Zieve, Michael** (Institute for Advanced Study, US)

**Intersections of polynomial orbits, and a dynamical Mordell-Lang conjecture**



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15.00 - 16.00      **Einsiedler, Manfred** (Ohio State University, ETH Zürich & MPI, Germany)  
**Diophantine approximation on invariant fractals**

*Tea break*

16.30 - 17.30      **Nevo, Amos** (Technion - Israel Institute of Technology & MPI, Germany)  
**Ergodic theory and lattice points**

18.00 –              **Open problems session**

### **Wednesday 22 July 2009**

09.00 - 09.50      **Shapira, Uri** (Hebrew University of Jerusalem, Israel & MPI, Germany)  
**Applications of rigidity of higher rank hyperbolic actions**

*Tea break*

10.30 - 11.30      **Lindenstrauss, Elon** (Hebrew University of Jerusalem, Israel & MPI, Germany)  
**Arithmetic combinatorics and effective equidistribution**

11.40 - 12.40      **Ugarcovici, Ilie** (DePaul University, US & MPI, Germany)  
**Structure of attractors for (a,b)-continued fractions, II**

*Lunch*

14.00 – 15.00      **Pollicott, Mark** (University of Warwick, UK & MPI, Germany)  
**Random matrix products and absolute continuity of the associated measures**

15.10 – 16.00      **Solomyak, Boris** (University of Washington, US & MPI, Germany)  
**Dynamics of self-affine tilings and algebraic number theory**

*Tea break*

20.00 –              **Conference dinner**

### **Thursday 23 July 2009**

09.00 - 09.50      **Wang, Zhiren** (Princeton University, US & HCM, Germany)  
**A quantitative result on actions of commutative toral automorphisms**

*Tea break*

10.30 - 11.30      **Yoccoz, Jean-Christophe** (Collège de France & MPI, Germany)  
**Affine interval exchange maps**

11.40 - 12.40      **Margulis, Gregori** (Yale University, US)  
**Distribution of values of indefinite quadratic forms at integral points**

*Lunch*



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- 14.00 – 14.50      **Jones, Rafe** (College of the Holy Cross, US)  
**Galois actions on preimage trees**
- 15.00 – 16.00      **Ulcigrai, Corinna** (University of Bristol, UK & MPI, Germany)  
**Absence of mixing in locally Hamiltonian flows on surfaces**
- Tea break*
- 16.30 – 17.30      **Oh, Hee** (Brown University, US & MPI, Germany)  
**Orbital counting for Thin groups**

### **Friday 24 July 2009**

- 09.00 - 09.50      **Snoha, Lubomir** (Matej Bel University, Slovakia & MPI, Germany)  
**Topology of minimal sets**
- Tea break*
- 10.30 - 11.30      **Gorodnik, Alexander** (University of Bristol, UK & MPI, Germany)  
**Rigidity of actions on algebraic spaces**
- 11.40 - 12.40      **Skau, Christian** (Norwegian University of Science and Technology & MPI, Germany)  
**Orbit equivalence and (ordered) K-theory**
- Lunch*
- 14.00 -**              **Boat trip on the Rhine**

### **Saturday 25 July 2009**

Morning              *Departure*