

Programme on
“Mixing Flows and Averaging Methods”
April 4 – May 25, 2016

organized by

Peter Bálint (TU, Budapest), Henk Bruin (U Vienna), Carlangelo Liverani (U Rome, Tor Vergata), Ian Melbourne (U Warwick), Dalia Terhesiu (U Exeter)

Budapest-Vienna Seminar

April 8, 2016

13:10 – 13:15 **Opening**

13:15 – 14:15 **Maciej Wojtkowski**

Integrable and chaotic Gaussian thermostats on some homogenous spaces

14:30 – 15:30 **Jozef Bobok**

(Quasi)similarity of polygonal billiards

15:30 – 16:00 *break*

16:00 – 17:00 **Balázs Bárány**

Ledrappier-Young formula and exact dimensionality of self-affine measures

All talks take place at the ESI, Schrödinger Lecture Hall!

Abstracts:

- **Balázs Bárány (TU Budapest):** Ledrappier-Young formula and exact dimensionality of self-affine measures

Abstract: In this talk, we investigate the long standing problem of exact dimensionality of self-affine measures. We show that every self-affine measure on the plane is exact dimensional regardless of the choice of the defining iterated function system and it satisfy the Ledrappier-Young formula.

- **Jozef Bobok (TU Prague):** (Quasi)similarity of polygonal billiards

Abstract: We introduce and compare three relations defined on the set of all polygonal billiards. We also investigate when two related polygonal billiards are similar or quasisimilar, respectively.

- **Maciej Wojtkowski (University of Opole):** Integrable and chaotic Gaussian thermostats on some homogenous spaces

Abstract: A class of left-invariant second order reversible systems with functional parameter is introduced which exhibits the phenomenon of robust integrability: an open and dense subset of the phase space is filled with invariant tori carrying quasi-periodic motions, and this behavior persists under perturbations within the class. Real-analytic volume preserving systems are found in this class which have positive Lyapunov exponents on an open subset, and the complement filled with invariant tori.