ESI Erwin Schrödinger International Institute for Mathematics and Physics

universität wien

DVR 0065528

Workshop on

"Numeration and Substitution"

July 8 – 12, 2019

organized by

Henk Bruin (U Vienna), Clemens Heuberger (U Klagenfurt), Daniel Krenn (U Klagenfurt), Jörg Thuswaldner (U Leoben)

- **Monday, July 8, 2019**

  09:00 – 09:30 **Registration**

  09:30 – 10:00 **Christiane Frougny**
  Two applications of the spectrum of numbers

  10:00 – 10:30 **Wolfgang Steiner**
  Thue-Morse-Sturmian words and critical bases for ternary alphabets

  10:30 – 11:00 *Coffee / Tea Break*

  11:00 – 11:30 **Hitoshi Nakada**
  On the maximum value of entropy of α-continued fraction maps

  11:30 – 12:00 **Niels Langeveld**
  Continued fractions with a finite alphabet $\mathcal{A} \subset \mathbb{R}$

  12:00 – 12:30 **Benthen Zeegers**
  An extension of Lochs' Theorem to a class of random interval maps

  12:30 – 14:15 *Lunch Break*

  14:15 – 14:45 **Marie Lejeune**
  Computing the k-binomial complexity of the Thue-Morse word

  15:45 – 15:15 **Célia Cisternino**
  State complexity of the multiples of the Thue-Morse set

  15:15 – 15:45 *Coffee / Tea Break*

  15:45 – 16:45 **Jeffrey Shallit**
  Determining Repetition Thresholds via Logic and Numeration Systems

- **Tuesday, July 9, 2019**

  09:00 – 10:00 **Pascal Hubert**
  Tiling Billards

  10:00 – 10:30 *Coffee / Tea Break*

  10:30 – 11:00 **Sebastién Labbé**
  From Sturmian to Wang shifts

  11:00 – 11:30 **Jeong-Yup Lee**
  Regular model sets on Pisot family substitution tilings in $\mathbb{R}^d$ with pure discrete spectrum

11:30 – 12:00 **Ligia Loretta Cristea**
On triangular labyrinth fractals

12:00 – 12:30 **Paul Surer**
A very general approach for representing integers

12:30 – 14:15 *Lunch Break*

14:15 – 14:45 **Tomáš Vávra**
Continued β-fractions in the quadratic Pisot case

14:45 – 15:15 **Hana Dlouha**
Algorithms performing algebraic operations in multidimensional continued fraction representations

15:15 – 15:45 *Coffee / Tea Break*

15:45 – 16:15 **Marta Maggioni**
Flipped α-continued fractions class of random interval maps

16:15 – 16:45 **Magdaléna Tinková**
Jacobi-Perron algorithm and indecomposable integers in the simplest cubic fields

- **Wednesday, July 10, 2019**

09:00 – 9:30 **Karma Dajani**
Minkowski Normal Numbers

09:30 – 10:00 **Dominik Kwietniak**
Borel complexity of sets of normal numbers via generic points in subshifts with specification

10:00 – 10:30 **Bill Mance**
Descriptive Complexity in Cantor series

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 11:30 **Jean-Paul Allouche**
The zeta-regularized product of evil numbers

11:30 – 12:00 **Lukas Spiegelhofer**
Möbius orthogonality and the sum of digits in different bases

12:00 – 12:30 **Myriam Amri**
On the largest prime factors and strongly q-additive functions

12:30 – 18:00 **Free Afternoon**

- **Thursday, July 11, 2019**

09:00 – 10:00 **Anthony Quas**
Lyapunov exponents for Perron-Frobenius cocycles of Blaschke Products

10:00 – 10:30 *Coffee / Tea Break*

10:30 – 11:00 **Alexandra Skripchenko and Charles Fougeron**
Lyapunov Spectrum for Triangle Partitions

11:00 – 11:30 **Radhakrishnan Nair**
Ergodic Theorems in positive characteristic time

11:30 – 12:00 **Roman Nikiforov**
Ergodic and fractal properties of the GLS-expansion of real numbers and generalizations

12:00 – 12:30 **Attila Pethő**
General shift radix systems and discrete rotation

12:30 – 14:15 *Lunch Break*

14:15 – 14:45 **Kevin Hare**
The Entropy of Cantor–like measures

14:45 – 15:15 **Shuqin Zhang**
On self-affine tiles whose boundary is a sphere

15:15 – 15:45 *Coffee / Tea Break*

15:45 – 16:15 **Fabien Durand**
Self-induced dynamical systems

16:15 – 16:45 **Drew Ash**
Speedups of Minimal Cantor Systems and Strong Orbit Equivalence

19:30 – 23:00 **Heurigen Evening**

- **Friday, July 12, 2019**

  09:00 – 09:30 **Lingmin Liao**
  Normal sequences with given limits of multiple ergodic averages

  09:30 – 10:00 **Wanlou Wu**
  The growth rate of periodic orbits and topological entropy

  10:00 – 10:30 **Sangtae Jeong**
  Ergodic functions over $\mathbb{Z}_p$

  10:30 – 11:00 *Coffee / Tea Break*

  11:00 – 11:30 **Attila Kovács**
  Lattice-based number expansions - past and present

  11:30 – 12:00 **Jakub Krásenský**
  Number Systems in Quaterions

  12:00 – 13:00 **Maria Isabel Cortez**
  Algebraic invariant of minimal Cantor systems

  13:00 *Closing*

All talks take place at ESI, Boltzmann Lecture Hall!