

Rudolf Dániel Prokaj

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Education

- 2018– **PhD in Mathematics**, *Budapest University of Technology and Economics*, Doctoral School of Mathematics and Computer Science.
Subject: Fractal Geometry, Supervisor: Károly Simon, PhD
- 2016–2018 **MSc in Applied Mathematics**, *Budapest University of Technology and Economics*, Stochastics specialization, excellent diploma.
MSc thesis: The dimension theory of some families of non-conformal iterated function systems
Supervised by Károly Simon, PhD
- 2013–2016 **BSc in Mathematics**, *Budapest University of Technology and Economics*, Applied Mathematics specialization, I graduated with highest honors..
BSc Thesis: The Ledrappier-Young formula for self-affine iterated function systems
Supervised by Károly Simon, PhD

Experience

- 2016– **Demonstrator**, *Budapest University of Technology and Economics*.
I graded homeworks and short tests written in the beginning of the lectures, and administrated the results in the following courses for mathematicians: Stochastic Differential Equations, Stochastic Analysis and Applications, Functional Analysis, Stochastic Processes.
- 2018– **Instructor**, *Budapest University of Technology and Economics*.
I held and prepared practices, and corrected midterms and exams.
- Mathematics EP2 (for architects)
 - Mathematics EP1 (for architects)
 - Prepclass for MSc mathematicians
 - Higher Mathematics - Stochastics (for electric engineers)
- 2021– **Lecturer**, *Budapest University of Technology and Economics*.
I held the following lectures:
- Probability Theory 1 (for mathematicians)

Conferences and Schools

- 14-18. **Visegrád Conference on Dynamical Systems 9**,
06.2021. *online, Czech Technical University, Prague.*

- 22-26. **Ergodic Theory and Related Fields**,
 07.2019. *IMAR, Bucharest, Romania*, (30 min talk),
 Title of presentation: Piecewise linear iterated function systems on the line.
- 22-26. **Thermodynamic Formalism: Ergodic Theory and Geometry**,
 07.2019. *Warwick University, Coventry, UK*.
- 24-28. **Visegrád Conference on Dynamical Systems 8**,
 06.2019. *Rényi Intézet, Budapest, Magyarország*, (Local Organizer).
- 15-18. **School on smooth ergodic theory and partially hyperbolic systems**,
 04.2019. *Loughborough University, Loughborough, UK*.
- 06-12. **Dynamics, measures and dimensions**,
 04.2019. *Conference center, Będlewo, Poland*.
- 05-11. **International Workshop and Conference on Topology and Applications**,
 12.2018. *Rajagiri School of Engineering and Technology, Kochi, Kerala, India*.
- 10.2015. **Simons Semester in Banach Center: "Dynamical Systems"**,
IMPAN, Warsaw, Poland.

Seminar talks

- 03-04. **Fractal Talks**,
 06.2021. *online, University of Bristol*, (30 min talk),
 Title of presentation: Continuous piecewise linear iterated function systems on the line.

Publications

- 2021 **Piecewise linear iterated function systems on the line of overlapping construction**,
R.D. Prokaj, K. Simon, *Nonlinearity*, (submitted).
- 2020 **Climate change in a conceptual atmosphere-plankton model**,
G. Károlyi, R.D. Prokaj, T. Tél, I. Scheuring, *Earth System Dynamics*.

Languages

Hungarian - Native, **English** - Fluent

Computer skills

Intermediate knowledge of: Python, \LaTeX , Microsoft Excel

Basic knowledge of: HTML, CSS, SQL, C++, Wolfram Mathematica