

# CURRICULUM VITAE

**Name:** Károly SIMON (first name Károly, family name: Simon)

**Date of Birth:** 1961

*Present permanent appointment:* Professor of mathematics (since 2008) and head of the Department of Stochastics, Budapest University of Technology and Economics, Hungary (since 2012)

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*Web site:* www.math.bme.hu/ simonk.

*Nationality:* Hungarian (EU National)

## **Studies and degrees:**

**2007:** DSc. degree from Hungarian Academy of Sciences.

**2002:** Habilitation. Awarded by Budapest University of Technology and Economics

**1992:** Ph.D. from the Hungarian Academy of Sciences, supervisor: Péter Major).

**1984:** MSc. from mathematics, (University of Szeged, Hungary. Supervisor: Vilmos Totik).

## **Appointments:**

**2018:** (1 month) Chinese University of Hong Kong (academic visitor).

**2017:** (6 weeks) Mittag-Leffler Institute (visiting researcher).

**2016:** (3 months) Visiting fellow at ICERM, Brown University.

**2015:** (4 months) Visiting professor at the Institute of Mathematics Polish Academy of Sciences (IMPAN) Warsaw.

**2012-:** Head of Department of Stochastics, Budapest University of Technology and Economics

- 2008-:** Professor at the Budapest University of Technology and Economics
- 1999-2008:** Associate Professor at the Budapest University of Technology and Economics.
- 2005-2006:** (12 months) Marie Curie Research Fellow at the University of Warwick, UK.
- 2005:** (6 months) visiting associate professor at the University of Washington.
- 2002** (1 month) University Picardie Jules Verne, Amiens, France.
- 1999-2008:** Associate professor at the Budapest University of Technology and Economics.
- 1998-99:** (5 months) visiting research fellow the CWI, Amstredam.
- 1996-97:** (12 months) visiting associate professor at the University of Washington.
- 1994-99:** Associate professor at the University of Miskolc (Hungary).
- 1993-94:** (12 months) Postdoctoral fellow at the University of Warwick, UK.

## Awards

- 2017** "Tibor Szele Prize" from the János Bolyai Mathematical Society (Hungary)
- 2016** "Academy Prize" from the Hungarian Academy of Sciences, for research.
- 2008** "Bolyai Plakett" from Hungarian Academy of Sciences, for research.
- 2001** "Alexits prize" from Hungarian Academy of Sciences, for research.

# Research

**Research interests:** Fractal Geometry, Dynamical Systems, Geometric Measure Theory, Complex Networks. I have been working on the computation of Hausdorff dimension and Hausdorff measure for attractors of deterministic or random hyperbolic dynamical systems since 1990. Recently I started to work on mathematics related to Complex Networks. Previously I worked on some fields connected to one dimensional dynamics and real analysis.

For the list of my papers visit click papers on the electronic version of this CV or visit my web site: [www.math.bme.hu/~simonk](http://www.math.bme.hu/~simonk).

Also to see my research profile on google scholar click here on the electronic version of this CV or visit

<https://scholar.google.com/citations?user=l4ABkTMAAAAJ&hl=en>

## **Some of the invited and plenary talks at Conferences since 2011:**

1. Thermodynamic Formalism: Ergodic Theory and Geometry, University of Warwick, UK, 22-26 July, 2019.
2. Invited talk on the Minisymposium "Recent Advances/Applications of Iterated Function Systems and Fractal Functions" within the 9th International Congress on Industrial and Applied Mathematics, Valencia, Spain, 15-19 July, 2019.
3. Dynamics, measures and dimensions, Bedlewo, Poland, 7-12 April, 2019.
4. International workshop and conference on topology & applications, Rajagiri School of Engineering & Technology, Cochin, India, 5-11 December, 2018.
5. Workshop on fractals II, The Hebrew University, Jerusalem, 27-31 August, 2017.
6. 7th Visegrad Conference on Dynamical Systems Opava, Czech Republic, 26-30 June 2017.

7. Just a little calculus in Dynamics, Bedlewo, Poland, 13-19 August, 2017.
8. Harmonic analysis and geometry of fractals, Ohio State University, 3-5 February, 2017.
9. Analysis on fractals and graphs workshop, Yau Mathematical Sciences Center, Sanya, China, 26-30 December, 2016.
10. Hyperbolic Dynamics and Statistical Physics, ESI, Vienna, Austria, 17-21 May, 2016.
11. Fractal Geometry, Hyperbolic Dynamics and Thermodynamical Formalism, ICERM Brown University, USA, 7-11 March, 2016.
12. Ergodic, algebraic and combinatorial methods in dimension theory, ICERM Brown University, USA, 15-19 February, 2016
13. Fractal Geometry and Dynamics, Bedlewo, Poland, 12-16, October, 2015.
14. New Directions in Fractal Geometry, ANU Canberra, Australia, 23-28 November, 2014.
15. Workshop on Fractals, The Hebrew University, Jerusalem, Israel, 8-12 June, 2014.
16. Fractal Geometry and Stochastics V, Tabarz, Germany 24-29 March, 2014.
17. International conference and workshop on fractals and wavelets, Rajagiri School of Engineering & Technology, Chocin, India, 9-16 November, 2013.
18. Advances on fractals and related topics, Hong Kong, Chinese Univ. of Hong Kong, 10-14 December 2012.
19. Ergodic Methods in Dynamics, Bedlewo, Poland, 23 - 27 April 2012,
20. Workshop on Ergodic Theory and Dynamical Systems. University of Warwick England. 11-15 July, 2011.

21. Ergodic Theory in Fractal Geometry. Kent State University, USA. 20-27 June, 2011.
22. Fractals and related fields II. Porquerolles, France. 13-17 June 2011.
23. Dimension Theory and Dynamical Systems. University of Warwick England. 18-21 April, 2011.

**Mini Courses given on Fractal Geometry for graduate students**

1. Dynamics, measures and dimensions, Bedlewo, Poland, 6-7 April, 2019.
2. International workshop and conference on topology & applications, Rajagiri School of Engineering & Technology, minicourse, Chocin, India, 5-8 December, 2018.
3. International conference and workshop on fractals and wavelets, Rajagiri School of Engineering & Technology, minicourse, Chocin, India, 2013. november 9-16.
4. IMPA Rio de Janeiro, minicourse of 9 lectures each of 90 minutes, January, 2015.
5. Probabilistic and dynamical properties of (semi)-group actions. Univ. de Santiago de Chile, minicourse, 7-18 January 2008.
6. Fractal geometry and dynamics II school/workshop, minicourse, Warsaw, Banach Center. 3-7 December, 2007.
7. Fractal geometry and dynamics, minicourse Warsaw, Banach Center. 10-13 April, 2006.

**Organizing conferences:**

- 2019** One of the two main organizers of the 9th Visegrad conference on dynamical systems, Rényi Institute, Budapest, 24-29 June, 2019.
- 2000** One of the two organizers of Measure Theory with Geometric and Dynamical Aspects conference, Révfülöp (Hungary).

**1998** The organizer of Dimensions and Dynamics Conference, Miskolc (Hungary).

## **Professional Service**

1. Chairman of the OTKA (Hungarian Science Foundation) Mathematics Panel (2010-2012).
2. Member of the Natural Science Committee of the Hungarian Accreditation Committee 2008-2012.

### **Editorial work:**

I was an editor of the Central European Journal of Mathematics 2003-2007.

# Teaching

### **Teaching in the UK and in the USA:**

1. *University of Washington*: in 1996/97 and 2005, I taught altogether 14 courses: Vector analysis, Real analysis, Multivariate calculus, Differential equations, Linear algebra and Probability theory courses.
2. *University of Warwick*: I taught the course "Geometric integration" in 1994.

### **Teaching in Hungary for foreign students in English:**

1. Stochastic processes (for BSc and master students),
2. Markov processes and martingales (graduate course),
3. Fourier analysis and fractals course, (graduate course),
4. Random graphs and Networks, (graduate course),
5. Fractals and geometric measure theory, (graduate course).

**Teaching in Hungary for Hungarian students:** I taught all possible courses for BSc engineering students (all of them many times since 1986), and the Master course on mathematics for civil engineering master students.