Curriculum vitae, Sándor Baran

Education, degrees

- Doctor of the Hungarian Academy of Sciences (DSc), Mathematical Sciences, 2021.
- Habilitation in Mathematical Sciences, University of Debrecen, 2006.
- PhD in Mathematics and Computer Science, University of Debrecen, 2001 (summa cum laude).
- MSc Degree: Mathematics, Kossuth Lajos University, Debrecen, 1995 (excellent).
- MSc Degree: Teacher of mathematics, English-Hungarian technical translator of mathematics, Kossuth Lajos University, Debrecen, 1996 (excellent).

Scientific Awards

- ECMWF Fellowship, 2021 – 2023;
- János Bolyai Research Scholarship of the Hungarian Academy of Sciences, 2015 – 2018;
- Gyires Béa Prize, awarded by the Section of Mathematics of the Hungarian Academy of Sciences, 2012;
- Award of the Faculty of Informatics, University of Debrecen, 2006;
- Farkas Gyula Prize, awarded by the János Bolyai Mathematical Society, 2004;
- János Bolyai Research Scholarship of the Hungarian Academy of Sciences, 2001 – 2004;
- Grünwald Géza Prize, awarded by the János Bolyai Mathematical Society, 2004.

Research interests

- Probabilistic weather forecasting;
- Parameter estimation problems of discrete and continuous random fields;
- Parameter estimation problems in classical and measurement error regression models;
- Applied statistics (biological, geological and medical applications);
- Stochastic optimization (simulated annealing).

Publications

Papers in peer-reviewed journals:

- Published: **56**
- Accepted: **1**
- Submitted: **0**

Papers in conference proceedings:

- Published: **6**

Contributions to international conferences:

- Invited talks: **15**
- Talks: **39**
- Posters: **2**

Cumulative impact factor: **64.442**
Number of independent citations: **448**

Research trips

- European Centre for Medium-Range Weather Forecasts, United Kingdom, 21 – 24.11.2017, 14 – 25.05.2018, 01 – 08.06.2019, 01.09 – 30.11.2019;
- Heidelberg Institute for Theoretical Studies, Germany, 06.07 – 31.07.2014, 01.07 – 31.07.2015, 01.07 – 31.07.2016, 01.07 – 31.07.2017, 01.07 – 31.07.2018, 01.07 – 31.07.2019;
- Clausthal University of Technology, Germany, 21 – 27.10.2018;
- University of Valparaíso, Valparaíso, Chile, 26.08 – 10.09.2018;
- Federico Santa María Technical University, Valparaíso, Chile, 29.05 – 09.06.2015;
- University of Heidelberg, Germany, 01.03 – 31.08.2013, visiting professor;
- Johannes Kepler University, Linz, Austria, 2011 – 2017 (2 – 4 weeks every year);
- University of Alberta, Edmonton, Canada, 13.01 – 03.02.2007;
- Radboud University Nijmegen, The Netherlands, 1999 – 2009 (2 – 4 weeks every year);
- Chalmers University of Technology, Göteborg, Sweden, 15.02 – 15.03.1996, 01.06 – 28.06.1997.

Research grants

- Deutsche Forschungsgemeinschaft (DFG) Grant No. MO 3394/1-1, *Statistical post-processing of ensemble forecasts for various weather quantities*, 2018–2021, researcher.
- National Research, Development and Innovation Office, Grant No. NN125679, *Statistical post-processing of ensemble forecasts for various weather quantities*. 2018–2022, project leader.
- Hungarian – Austrian intergovernmental S&T cooperation programme, TÉT 15-1-2016-0046. *Investigation of stochastic models based on Ornstein-Uhlenbeck sheets with applications in environmental sciences.* 2016–2018, project leader.
- TÁMOP-4.2.2.C-11/1/KONV-2012-0001. *Future internet research from theory to applications.* 2012–2014, subproject 5,

research topic 5.5, group leader.
- Hungarian – Austrian intergovernmental S&T cooperation programme, TÉT 10-1-2011-0712. *Optimal design for parameters of Ornstein-Uhlenbeck processes and sheets.* 2012–2014, project leader.
- Hungarian Scientific Research Fund, Grant No. OTKA NK101680/2012. *Mathematical modelling of clinical observations for improved melanoma detection.* 2012–2014, researcher.
- TÁMOP-4.2.1./B-09/1/KONV-2010-0007/IK/IT. 2010–2012, researcher.
- Hungarian Scientific Research Fund, Grant No. OTKA T079128/2009. *Limit theorems and their applications.* 2009–2013, researcher.
- Hungarian Scientific Research Fund, Grant No. OTKA T048544/2005. *Limit theorems and their applications.* 2005–2007, researcher.
- Hungarian Scientific Research Fund, Grant No. OTKA F046061/2004. *Statistical investigation of stochastic models.* 2004–2007, project leader.
- Hungarian Scientific Research Fund, Grant No. OTKA F032060/2000. *Investigation of nonlinear regression and time series models.* 2000–2003, researcher.
- Hungarian Scientific Research Fund, Grant No. OTKA T032361/2000. *Statistical investigation of stochastic models.* 2000–2003, researcher.
- FKFP 0121/1999, researcher.
- TEMPUS SJEP project no. 9521. *Preparing a statistical services unit in Hungary.* 1996–1997, researcher.

Positions

Faculty of Informatics, University of Debrecen:
- July 1, 2019– : Vice-Dean of Scientific Affairs

Department of Applied Mathematics and Probability Theory, Faculty of Informatics, University of Debrecen:
- September 1, 2020 –: Full Professor;
- November 1, 2020 –: Head of the Department;
- September 1, 2006 – August 31, 2021: Associate Professor;
- July 1, 2001 – August 31, 2006: Assistant Professor;
- July 1, 1999 – June 30, 2001: Instructor;
- July 1, 1998 – June 30, 1999: Computer Assistant.

Institute of Applied Mathematics, University of Heidelberg:
- March 1 – August 31, 2013: Visiting Full Professor

European Centre for Medium-Range Weather Forecasts:
- September 1 – November 30, 2019: Visiting Researcher

Membership of professional bodies

- European Geosciences Union (since 2019).
- János Bolyai Mathematical Society (since 2018).
- The International Environmetrics Society (since 2017).
- European Regional Committee of the Bernoulli Society (2013 – 2016).
- Public law association of the Hungarian Academy of Sciences (since 2004).

Editorial and reviewing work

- Member of the Editorial Board of the *Alkalmazott Matematikai Lapok.*
- Reviewer of the Hungarian Scientific Research Fund.
- Reviewing work for journals:
  Acta Scientiarum Mathematicarum (Szeged), Advances in Atmospheric Sciences, Advances in Water Resources, Annals of Applied Statistics, Applied Energy, Applied Mathematical Modelling, Atmospheric Science Letters, Biometrics, Catena, Communications in Statistics – Simulation and Computation, Communications in Statistics – Theory and Methods, Environmetrics, Geophysical Research Letters, IEEE Transactions on Mobile Computing, IEEE Transactions on Signal Processing, International Journal of Forecasting, Journal of Applied Meteorology and Climatology, Journal of Multivariate Analysis, Journal of the Operational Research Society, Journal of the Royal Statistical Society Series C, Lithuanian Mathematical Journal, Meteorological Applications, Methodology and Computing in Applied Probability, Metrika, Monthly Weather Review, Neural Computing and Applications, Nonlinear Processes in Geophysics, Publicationes Mathematicae Debrecen, Quarterly Journal of the Royal Meteorological Society, Software X, Solar Energy, Statistical Papers, Statistics, TEST, Theory of Probability and Mathematical Statistics.

Language skills

English (advanced, C2), Russian (advanced, C2), Italian (beginner, A1.2), German (beginner, A1.2).