

cv Stefan Thurner

Section for Science of Complex Systems (Head)
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Year of Birth: 1969

Place of Birth: Innsbruck, Austria

Nationality: Austrian

Education

- Habilitation in Theoretical Physics, TU Wien, 2001
- Dr.rer.soc.oec. in Financial Economics, University of Vienna, 2001
- Dr.techn. in Theoretical Physics, TU Wien, 1995
- Magister rer.nat. in Theoretical Physics, University of Vienna, 1993

Career History

- Visiting Professor at Nanyang Technological University Singapore, 2016-present
- President of Complexity Science Hub Vienna, 2015-present
- Full Professor for Science of Complex Systems at Medical University Vienna, 2009-present
- Senior Researcher at IIASA, Laxenburg, 2010-present
- External Professor at Santa Fe Institute, 2007-present
- Associate Professor at Medical University of Vienna, 2004-2009
- Associate Professor (a.o. Universitätsprofessor, tenure) at University of Vienna, 2001-2004
- Tenure track position (Universitätsassistent) at University of Vienna, 1999-2001
- Postdoctoral Position at Vienna University of Technology, Vienna, 1998-1999
- Research Associate at Boston University, Boston, 1996-1997
- Postdoctoral Position at Humboldt University, Berlin, 1996
- Guest researcher at Columbia University, New York, 1995 and 1996

Scientific Interests

- *Complex Systems*: (1) Statistical mechanics of Complex Systems (2) Theory of evolutionary processes (3) Entropy and statistics of history-dependent systems (4) Network theory (5) Origin of scaling laws
- *Life Sciences*: (1) Gene regulatory networks (2) Big medical data (3) In-silico models of cells (4) Cell motility
- *Quantitative Social Sciences*: (1) Formation, organization, and stability of social structures (2) Dynamics of innovation and collapse (3) Quantification of human behavior (4) Opinion formation
- *Systemic Risk*: (1) Quantification, understanding, and management of systemic risk (2) Financial regulation (3) Big financial data (4) Large-scale models of the economy and health-care systems
- *Mathematics*: (1) Wavelet analysis (2) Diffusion processes (3) Fractal harmonic analysis
- *Particle Physics*: Topology of quantum gauge fields (not active)

Publications/Patents

- About 200 publications in journals such as PNAS, Physical Review (Letters, D, E) Theoretical Biology, Nuclear Physics B, J Quantitative Finance, Neuroimage, J Pathology, PLoS Computational Biology, Europhysics Letters, Scientific Reports, Physica A, Applied Bioinformatics, Social Networks, J Banking and Finance, J Financial Stability, J Econ Behavior and Control. Publications cover complex systems, statistical mechanics, quantum chromodynamics, network medicine, network theory, stochastic processes, systemic risk, financial economics and computational social science
- Two patents

Conferences

- About 170 invited talks and lectures at international conferences and summer schools. More than 150 talks at conferences, workshops and seminars

Mass Media

- Work has been covered by the media such as Nature, Science, New Scientist, Physics World, Scientific American, New York Times, Physical Review Focus, Science News, as well as by more than 400 international newspaper, television and radio reports

Service

- Editorial boards: *Scientific Reports*, *Physica A*, *Advances of Complex Systems*, *Frontiers in Fractal Physiology*, *Entropy*, *Springer Complexity Series*, *J of Computational Social Science*. Organizer, steering committee and board member of numerous conferences and workshops. National representative of several European research initiatives. Member of several advisory boards.

Visiting appointments/Honors

- Member European Academy of Sciences and Arts, 2018
- Member Senior Common Room Magdalen College, Oxford 2017
- Visiting Professor Nanyang Technological University, 2016-present
- Fellow Collegium Budapest, 2007
- Research Stipend of the Austrian Ministry of Science, BMWFK, 1995

Funding as coordinator

- FFG Project 857136 2016-2019
- Austrian Science Fund FWF Project I3073 2017-2020
- Austrian Science Fund FWF Project P29252-N32 2016-2019
- Austrian Science Fund FWF Project P29032-N32 2016-2019
- FP7 LASAGNE Project 318132 2012-2015
- Austrian Science Fund FWF Project P23378 2011-2014
- Austrian Science Fund FWF Project P19132, 2006-2010
- Austrian Science Fund FWF Project P17621, 2004-2008
- WTZ/OEAD: Bilateral Project: Slovenia-Austria SI-AT/04-05/01, 2004-2005
- WWTF Project LS139, 2004-2008
- Austrian Science Fund FWF Project P16022, 2002-2004
- Austrian National Bank Project P8584, 2000-2003