

# Jürgen Fuchs — CV

Date and place of birth: 19 May 1957; Baden-Baden, Germany

Marital status: Married, 3 children

Doctoral degree: 1985 at Heidelberg University, Germany

Professor of Theoretical Physics at Karlstad University, Sweden, since 2002

## Previous positions:

01/2000 - 04/2002: Associate Professor at Karlstad University

04/1999 - 12/1999: Scientific Associate, ETH Zürich (Switzerland)

10/1998 - 03/1999: Scientific Associate, CERN, Genève (Switzerland)

10/1997 - 09/1998: Senior Scientist, Max-Planck-Institut for Mathematics, Bonn (Germany)

10/1992 - 09/1997: Heisenberg Fellow of the German Research Council (DFG)

09/1988 - 09/1990 & 10/1991 - 03/1992: Postdoc at NIKHEF, Amsterdam (Netherlands)

10/1990 - 09/1991 & 04/1992 - 09/1992: Fellow at CERN, Genève (Switzerland)

02/1987 - 08/1988: Postdoc at Heidelberg University, Heidelberg (Germany)

09/1985 - 01/1987: Postdoc at Princeton University, Princeton (NJ, USA)

## Recent long-term research visits:

2021, 2020: Visitor at Hamburg University, Germany ( $2 \times 1.5$  months)

2019: Visitor at Nanjing University, China (2 weeks)

2018: Visiting Professor at Hamburg University, Germany (4 months)

2017: Visitor at the University of Alberta, Edmonton, Canada (2 months)

2016: Visiting Professor at Hamburg University, Germany (6 months)

2015: Distinguished Visiting Fellow at ANU (Australian National Univ.), Canberra (3 weeks)

2014: Visitor at ESI (Erwin Schrödinger Institute), Vienna (1.5 months)

2011: Visitor at BICMR, Peking University, China (3 weeks)

## Publications:

- > 125 publications in peer-reviewed international journals and book series
- > 30 contributions to Conference Proceedings
- 3 books
- 6 books co-edited

For a complete list of publications, with links to online versions, see e.g. the following web pages:

- [scholar.google.de/citations?hl=en&user=o2n0UsUAAAAAJ](https://scholar.google.de/citations?hl=en&user=o2n0UsUAAAAAJ) (scholar.google)
- [jfuchs.hotell.kau.se/gen/pub.html](http://jfuchs.hotell.kau.se/gen/pub.html) (personal home page)

## Refereeing

- Referee for various international academic journals, including:  
Advances in Mathematics, Applied Categorical Structures,  
Communications in Mathematical Physics, Compositio Mathematica,  
Contemporary Mathematics, Crelle’s Journal, Geometriae Dedicata,  
Journal of Algebra, Journal of Geometry and Physics, Journal of Mathematical Physics,  
Journal of Noncomm. Geometry, Journal of Physics A, Journal of Pure and Applied Algebra,  
Journal of the AMS, Letters in Mathematical Physics, Nuclear Physics B,  
Proc. of the London Math. Soc., Reports on Mathematical Physics, Quantum Topology,  
Representation Theory, Reviews in Mathematical Physics, SIGMA.
- External referee for promotion to Full or Tenured Professorship (recent):  
Stockholm University, Stockholm, Sweden (2024)  
University of Alberta, Edmonton, Canada (2022)  
American University of Bulgaria, Blagoevgrad, Bulgaria (2022)  
University of Arizona, Tucson, AZ, USA (2022)  
Fudan University, Shanghai, China (2021)  
Ohio University, Athens, OH, USA (2016)  
University of Stony Brook, NY, USA (2012)
- External referee for research grants (recent):  
European Science Foundation ESF (2024, 2012)  
Belgian Science Foundation F.R.S.-FNRS (2024)  
French Agence Nationale de la Recherche (2021, 2020)  
Austrian Science Fund FWF (2023, 2022, 2018, 2017)  
German-Israeli Minerva Foundation (2017, 2016)  
European Research Council ERC (2015)  
German Research Council DFG (2014)  
Portuguese Foundation for Science and Technology FCT (2014)  
Netherlands Organisation for Scientific Research NWO (2012)  
US-Israel Binational Science Foundation BSF (2011)  
MATH-AmSud (France & South American countries) (2011)  
Alexander von Humboldt Foundation (2011)

## Service in international bodies:

- Member of the Editorial Board of SIGMA, since 2016
- Member of the expert panel W&T1 Mathematical Sciences of the FWO  
(Flemish Research Foundation, Belgium), 2012–2020 and 2023; 2019–2020 as chairperson
- Member of the Physics review panel of the National Research, Development and Innovation  
Office NKFIH (Hungarian Research Foundation), 2015–2016
- Member of the Steering Committee of the ESF research network “Interactions of  
Low-Dimensional Topology and Geometry with Mathematical Physics (ITGP)”, 2009–2014
- Member of the Scientific Board of the Baltic-Nordic Workshop Network  
“Algebra, Geometry, Mathematical Physics (AGMP)”, 2006–2014

Events coorganized (recent):

- 2017: School & workshop “Tensor categories and topological quantum matter”, Shanghai
- 2016: Conference “Classical and Quantum Symmetries in Mathematics and Physics”, Jena, Germany (Satellite Conference to the 7th European Congress of Mathematics)
- 2014: Program on “Modern trends in topological quantum field theory”, ESI, Vienna
- 2013: Conference “Moduli, Operads, and Dynamics”, Kongsberg, Norway
- 2012: Conference “3Quantum: Algebra, Geometry, Information”, Tallinn, Estonia (Satellite Conference to the 6th European Congress of Mathematics)
- 2011: Workshop “Conformal Field Theories and Tensor Categories”, Beijing

Speaker at international conferences (selection):

- 08/2023: NORDITA, Stockholm, Sweden: “Categorical aspects of symmetries”
- 10/2022: CRM, Montréal, Canada: “Tensor categories, TQFTs, vertex algebras”
- 10/2022: ESI, Vienna, Austria: “Tensor networks: Mathem. structures and novel algorithms”
- 08/2022: ESI, Vienna, Austria: “Higher structures and field theory”
- 11/2021: BIRS, Banff, Canada: “QFT and quantum topology beyond semisimplicity”
- 08/2020: ESI, Vienna, Austria: “Higher structures and field theory”
- 10/2019: Brussels, Belgium: “Wavefunctions and entanglement”
- 09/2019: Nanjing, China: “Hopf algebras and tensor categories”
- 09/2018: BIRS, Oaxaca, Mexico: “Geometric and categorical aspects of CFTs”
- 04/2018: Zeist, Netherlands: “CFT and categorical structures, beyond rationality”
- 10/2017: BIRS, Banff, Canada: “Contemporary topics in mathematical physics”
- 08/2017: Perimeter Inst., Waterloo, Canada: “Hopf algebras in Kitaev’s quantum double models”
- 08/2016: BIRS, Oaxaca, Mexico: “Modular categories – their rep’s, classification, and applications”
- 07/2016: Berlin: Mini-Symposium “Quantum algebras, quantum integrable models and quantum information” at the 7th European Congress of Mathematics
- 01/2015: IPAM, Los Angeles: “Symmetry and topology in quantum matter”
- 08/2012: Tianjin, China: “XXIX Intl. colloquium on group-theoretical methods in physics”
- 03/2011: Stony Brook, NY, USA: “Branes and Bethe ansatz in supersymmetric gauge theories”

Teaching at graduate schools (recent):

- 2017: “Tensor category theory and topological orders”,  
Summer school “Quantum entanglement and topological order”, Hong Kong
- 2015: “Topological defects in quantum field theory”,  
Nordic summer school in algebra and geometry, Tjarnö, Sweden
- 2012: “Characters and coends in conformal field theory”,  
XXth Oporto Meeting on Geometry, Topology and Physics, Porto, Portugal
- 2011: “Finite-dimensional Hopf algebras, coends, and modular invariant Frobenius algebras”. Beijing Intl. Center for Mathematical Research
- 2010: “CFT, TFT, algebras in tensor categories, and all that”,  
School on “Planar algebras and physics”, Cardiff, UK