

Curriculum Vitae

Hans J Briegel

Born on August 9, 1962, in Ochsenhausen, Germany, married, two children, German citizenship.



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Education

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| 2002 | Habilitation in Theoretical Physics, Ludwig-Maximilians-University (LMU) Munich, Thesis on <i>Quantum information and computers</i> |
| 1994 | Doctorate (PhD) in Physics, LMU Munich, Thesis on <i>Dissipative Jaynes Cummings model and its applications to microscopic lasers</i> |
| 1983 – 1990 | Studies of Physics and Philosophy at the University of Munich and the University of Edinburgh (1986-87), UK |
| 1982 – 1983 | Military service (Grundwehrdienst) in Germany |
| 1973 – 1982 | High school (Gymnasium) in Isny/Allgäu, Germany |
| 1969 – 1973 | Primary school (Grundschule) in Eisenharz/Allgäu, Germany |

Professional career

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| 2003 – today | Full Professor, University of Innsbruck Head of the Institute of Theoretical Physics: 2005-2008 |
| 2017 – 2020 | Visiting Professor, Department of Philosophy, University of Konstanz |
| 2003 – 2014 | Scientific Director at the Institute for Quantum Optics and Quantum Information (IQOQI), Austrian Academy of Sciences, Innsbruck |
| 11/2004; 9/2006 | Chair Professor, Tsinghua University, Beijing, China |
| 2003 | Offered a Chair in Theoretical Physics at the University of Düsseldorf (declined) |
| 2002 – 2003 | Privatdozent (~ <i>Senior Lecturer</i>), University of Munich (LMU) |
| 1997 – 2002 | Wissenschaftlicher Assistent (~ <i>Lecturer</i>), University of Munich (LMU) |
| 1997 – 1998 | TMR Postdoc, University of Innsbruck |
| 1996 – 1997 | Postdoctoral Fellow, Harvard University, and ITAMP, Harvard-Smithsonian Centre for Astrophysics, USA |
| 1994 – 1995 | Research Associate, Texas A&M University, USA |

Awards and fellowships

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| 2020 | Fellow of the ELLIS Society |
| 2018 | PNAS Cozzarelli Prize in Physical and Mathematical Sciences |
| 2013 | Elected Corresponding Member of the Austrian Academy of Sciences |
| 2013 | Descartes Senior Fellowship, Descartes Centre for the History and Philosophy of the Sciences and the Humanities, University of Utrecht |
| 2012 – | Honorary Visiting Professor, University of Bristol |
| 1994 – 97 | Feodor Lynen Fellowship of the Alexander von Humboldt Foundation |
| 1991 – 93 | Member of the Studienstiftung des Deutschen Volkes |
| 1986 – 87 | Fellowship of the German Academic Exchange Service (DAAD) |

Research topics

- Quantum information and computation
- Quantum machine learning
- Artificial intelligence in basic research
- AI-driven design of quantum experiment
- Agency and physics

Scientific publications

- **157** publications in peer-reviewed journals
- More than **14000** citations in total (*Web of Science*)
- **10** original research papers with more than **200** citations
- **3** original research papers with more than **1000** citations

The paper on the “Quantum repeater” (*Physical Review Letters* **81**, 1998) has been cited **1824** times according to *Web of Science* and has become a key reference in the field of long-distance quantum communication. The paper on the “One-way quantum computer” (*Physical Review Letters* **86**, 2001) has been cited **2478** times and was identified in 2010 by Science Watch/Thomson Reuters as the second most-cited paper in the field of quantum computation since 2000 (see <http://www.sciencewatch.com/ana/st/quantum/10augSTQuanBrie/>).

A nearly complete list of publications, including conference talks, seminars, and colloquia, can be found at <https://www.uibk.ac.at/th-physik/staff/briegel/>

Selection of professional activities

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| 2011 – 2017 | Member of the Board of the Austrian Science Fund (FWF) as Reporter (alternate) for Theoretical Physics and Astrophysics |
| 2018 | Chair (w/ Vedran Dunjko & Katja Ried) of the Conference “Quantum machine learning plus”, September 17-21, 2018, Innsbruck Austria. |
| 2014 | Chair (w/ David Wineland) of the Gordon Research Conference on “Quantum Science”, July 2014, Stonehill College Easton, USA. |
| 2011 | Chair (w/ MA Martin-Delgado) of the First Meeting on “Quantum information meets statistical physics”, July 8-12, 2011, El Escorial, Spain. |
| 2009 | Chair of the First Joint Annual Meeting of the Austrian and Swiss Societies of Physics and Astrophysics (ÖPG, SPG, ÖGAA), Innsbruck, September 2-4, 2009. |
| 2008 | Chair of the International QICS Workshop on “Foundational structures of quantum information”, September 14-20, 2008, Obergurgl, Austria. |
| 2005 | Board member of the European Road Map committee for quantum information processing and communication (QIPC). |
| 2005 | Coordinator and author of the theory part of the first European Road Map for quantum information science. |
| since 2008 | Member of the Austrian Physical Society (ÖPG). |
| 1994 – 1999 | Member of the American Physical Society (APS). |
| since 1991 | Member of the German Physical Society (DPG). |