

Curriculum Vitae

Rainer Kaltenbaek

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Personal Information

Citizenship: Austrian
 Date of birth: 31.08.1979
 Researcher unique identifier: orcid.org/0000-0002-9991-9919

Education

2019 **Habilitation**, experimental quantum optics, University of Vienna, Austria
 Public hearing on 10.10.2019, commission led by M. Arndt
 2004 – 2008 **PhD, Physics**, University of Vienna, Austria, Group of A. Zeilinger
 Defense on 16.7.2008 – passed with honors
 2002 – 2003 **MSc, Physics**, University of Vienna, Austria, Group of A. Zeilinger
 Final exam on 1.12.2003 – passed with honors
 1998 – 2002 **Undergraduate student**, physics, University of Vienna – passed with honors
 1989 – 1997 **High school**, Waidhofen/Th., Austria – final on 27.5.1997, passed with honors

Employment history

2019 – ... **Associate Professor**, Faculty of Mathematics and Physics, Univ. Ljubljana
 2017 – ... **Senior researcher**, Ursin group, IQOQI, Austrian Acad. Sci.
 2018 – 2021 **Principal Investigator** of “QuantumShield”, IQOQI, Austrian Acad. Sci.
 2016 – 2020 **Principal Investigator** of “ULE-Cavity-Access”, IQOQI & Univ. Vienna
 2013 – 2015 **Principal Investigator** of “MAQROsteps”, University of Vienna, Austria
 2012 – 2014 **Principal Investigator** of “NanoTrapS”, University of Vienna, Austria
 2010 – 2017 **Senior postdoctoral researcher**, Aspelmeyer group, Univ. Vienna, Austria
 2007 – 2010 **Postdoctoral researcher**, Resch group, University of Waterloo, Canada
 2002 – 2006 **Scientific employee**, Zeilinger group, Faculty of Physics, University of Vienna

Publication record overview

35 peer-reviewed publications, 5 conference proceedings, 2 book chapters and 3 extensive technical reports for ESA-funded projects, h-Index: 20, 2283 citations¹.

Teaching experience

- **2020-2022**: Seminar II, mandatory for master students, University of Ljubljana
- **2020-2022**: Lectures and exercises, “Photonics II”, University of Ljubljana
- **2019-2022**: Lectures “Test. Quantum Phys. on the Large Scale”, University of Vienna
- **2019-2020**: Lectures and exercises, “Quantum Optics”, University of Ljubljana
- **2016-2018**: Introductory Lab Courses, University of Vienna
- **2016-2018**: Multiple certificate courses, rhetoric and teaching skills, Univ. Vienna
- **2017**: Seminar on Quantum Physics with R. Bertlmann and M. Aspelmeyer
- **2011-2013**: Lectures with M. Aspelmeyer on Quantum Opt. & Quantum Computation
- **2008-2010**: Undergraduate and outreach courses, University of Waterloo
- **2003**: Lab Course, Quantum Optics, University of Vienna

¹ Web of Science, 04.02.2022; orcid.org/0000-0002-9991-9919

Supervision experience

1 postdoc, 1 PhD, 3 MScs, Co-Supervision: 1 postdoc, 6 PhD, 12 MSc, 4 coop students

Talks – overview

4 key-note, 22 invited, 15 contributed talks, 11 invited seminar talks, 7 poster contributions

Memberships in Scientific Societies

American Physical Society, Optical Society of America, German Physical Society (DPG)

Referee for

Science, PRX, PRL, PRA, PR Applied, Nature Comm., Opt. Exp., NJP, NJP2, Sci. Rep., EPJ, EPJ-ST, EPL, Found. Phys., J. Mod. Opt., JOSA, Entropy, Frontiers, and others

Editor for

- EPJ Quantum Technology (2018-...)
- Lead guest editor for Thematic Series ‘Space Applications of Quantum Technology’ in EPJ Quantum Technology (2015-2018)

Grants and fellowships

- **2021 – 2024: Principal Investigator**, ERC Complementary Grant, Slovenian Research Agency (ARRS, project no: N1-0180), € 150,000.00
- **2021 – 2024: Scientific Lead** of the Slovenian part of a bilateral project with Croatia, ARRS-HRZZ, project no: J2-2514, € 300,000.00
- **2013 – 2022: Principal Investigator** of 4 projects funded by the Austrian Research Promotion Agency (FFG, projects 889767, 865996, 854036, 840089), € 677,621.00
- **2016 – 2021: COST action CA15220** for Quantum Technologies in Space (“QTSpace”), co-proposer and working-group leader, ~ € 500,000.00
- **2012 – 2014: Principal Investigator** of “NanoTrapS” project funded by the European Space Agency (ESA, contract no: 4000105799/127NL/Cbi), € 198,164.00
- **09/2014: MAQRO International Exploratory Workshop** funded by the Swiss National Science Foundation, CHF 9,750.00
- **2011 – 2012: Scientific Lead** of “MQES” study funded by the European Space Agency (ESA), € 50,000.00
- **2011 – 2013: Marie Curie** fellowship of the European Commission, € 75,000.00
- **2011 – 2012: APART** fellowship of the Austrian Academy of Science, € 110,231.00

Scientific leadership and recognition

- **2010 – ...: Principal Investigator of the MAQRO mission proposal**
- **2021: Scientific lead** for MAQRO research-campaign proposal to NASA’s Decadal Survey BPS2023
- **2017 – 2018: Scientific lead** of the “Quantum Physics Platform” study for the European Space Agency’s **New Science Ideas** call
- **2016 – 2020: COST action CA15220** for Quantum Technology in Space, co-proposer and working-group leader (currently 26 participating countries)

Organization of scientific events – overview

1 summer school, 10 scientific workshops, 3 COST working group sessions