

## Curriculum Vitae

Name Wolf Dietrich Carl von Klitzing  
Date and place of birth 24.03.1969, Köln, Germany  
Nationality German  
Family Married, two children

### **Education**

18/03/1997 Doctor of Philosophy (Cambridge University)  
*'Ultra-High Resolution CO<sub>2</sub> Laser Spectroscopy and Transient Line Narrowing'*  
26/01/1993 Master of Philosophy (Cambridge University)  
*'10 $\mu$ m CO<sub>2</sub> Laser Spectroscopy using Acousto-Optic Modulation'*  
01/09/1991 – 30/11/1996 Cavendish Laboratory, University of Cambridge (UK)  
15/03/1989 – 31/08/1991 Ludwig Maximilians Universität München

### **Languages**

Mother tongue: German  
Fluent: English, French, Greek, Dutch  
Passive: Italian, Latin

### **Employment**

01/01/2005 – present Researcher at IESL-FORTH, Crete, Greece  
01/05/2006 – 27/04/2010 Marie-Curie Excellence Team Leader  
IESL-FORTH, Crete, Greece  
01/09/2000 – 30/09/2004 FOM-Post-doctoral Fellow in the group of  
Prof. Walraven, FOM Institute for Atomic and Molecular  
Physics (AMOLF), Amsterdam, The Netherlands  
(from 01/05/2004 at the Van der Waals Zeeman  
Institute, University of Amsterdam)  
01/12/1999 – 31/08/2000 Marie Curie post-doctoral Fellow in the quantum-optics  
group of Prof. De Martini, University of Rome 1 'La  
Sapienza', Italy  
01/12/1996 – 30/11/1999 Marie Curie Post-doctoral Fellow in the group of Prof.  
Serge Haroche at the École Normale Supérieure, Paris,  
France

## **Current Positions**

2023 – present	Invited member of the LEO Facility Definition Team (FDT) for a European Space Station (ESA).
2022 – present	Lead Scientist for FORTH of the LISA collaboration
2022 – present	Member of the Core Science Team of <a href="#">CARIOQA-PMP</a> the <i>EU Cold Atom Rubidium Interferometer in Orbit for Quantum Accelerometry – Pathfinder Mission Preparation</i>
2021 – present	Principal Investigator of the <a href="#">Space Optics Laboratory</a> @ IESL-FORTH
2019 – present	Member of the Core Science Team of CARIOQA – Cold Atom Rubidium Interferometer in Orbit for Quantum Accelerometry, which is preparing the first Atom-Quantum Gravity Mission of the EU
2014 – present	Member of the Core Science Team of <a href="#">ELGAR</a> – a proposed European Laboratory for Gravitation and Atom-interferometric Research.
2014 – present	Member of the Core Science Team of <a href="#">STE-QUEST</a> an ESA M-class mission proposal to test Einstein’s equivalence principle in space.
2005 – present	Principal Investigator of the <a href="#">BEC and Matterwaves Group</a> @ <a href="#">IESL-FORTH</a>

## **Past Positions**

2020 – 2022	President of the Scientific Council of IESL-FORTH
2019 – 2022	Greek Representative at the EU Group for the EU Quantum Communication Infrastructure
2017 – 2021	Chair of Atom Quantum Technologies (AtomQT), a COST coordination action comprising 32 countries

## **Academic Distinctions**

08/10/2005	‘Certificate of Excellence’ ‘Visions for Discovery in Honor of Charles H. Townes’ Young Scholars Competition, University of Berkeley
07/07/1999	Best poster at Laser Spectroscopy XIV international conference for ‘Green lasing in microspheres at very low pump powers’
01/03/1994 – 31/06/1994	Royal Society (UK), and Wolfson College Bursary

## **Competitive Research Grants 25/5/2024**

### **Active Grants**

- 2024 – 2027 RamanBC — Raman Beamsplitter Module for space-based quantum sensors (ESA)
- 2024 – 2027 QMem — Quantum Memory Testbed in collaboration with the DLR Institute for Quantum technologies in Ulm (ESA)
- 2024 – 2027 OQC — Optimal Quantum Control (US-NAVY)
- 2024 – 2024 FOMO — 50kEU Grant to organise the FOMO conference (US-NAVY)
- 2022 – 2026 MAWI — Research Training Network PhD studentship (EU)
- 2023 – 2026 SpaceTools — Technologies for space-based Laser Frequency References (ESA)
- 2023 – 2025 SkinUP — OGS upgrade to the Skinakas Telescope (ESA)
- 2019 – 2024 NanoLace — Future and emerging Technologies (EU)

### **Past Grants**

- 2017 – 2021 Chair of the Cost Action Quantum Technologies using Cold Atoms (*AtomQT*), a network of 37 countries
- 2017 – 2019 Scientific Coordinator of the Marie Curie Individual Fellowship of Georgos Vasilakis  
*Quantum Enhanced Sensing with Cold Atoms (QUESCA)*
- 2019 – 2020 *Optical Beam Steering Technology for Complex Space Missions (OBST2)*  
European Space Agency (ESA)
- 2019 – 2020 ATTRACT grant CEMIC on cavity enhanced microscopy
- 2014 – 2017 *Optical Beam Steering Technology for Complex Space Missions (OBST)*  
European Space Agency (ESA)
- 2013 – 2017 Coordinator of ICT-STREP “Joint Collaborative Task”  
*An Guided Matter-Wave Interferometer on an Atom-Chip (MatterWave)*
- 2012 – 2016 ITN Initial Networking Programme  
Quantum sensor technologies and applications (QTea)  
(36 months Ph.D., 18 months PostDoc )
- 2011 – 2015 ESF Research Networking Programme  
Common perspectives for cold atoms, semiconductor polaritons and nanoscience (POLATOM)
- 2005 – 2008 Transfer of Knowledge Grant of the EU  
(COWATIN)

- 2006 – 2010 Marie-Curie Excellence Grant  
A Guided Matter-Wave Interferometer on a Atom-Chip  
(MatterWaves)
- 2006 – 2010 Marie Curie Research Training Network  
Engineering, Manipulation and Characterization of Quantum States of  
Matter and Light (EMALI)
- 2008 – 2011 ESF Collaborative Research Project  
Quantum-Degenerate Gases for Precision Measurements  
EuroQUASAR (QuDeGPM)
- 2009 – 2011 ‘Mexico-Europe consortium for the development of applications in  
Quantum Information and Communication Technologies’  
FONCICYT-CONACYT fund allocation code: 94142
- 2012 ESF Travel Grant.

### **Committees**

- 2024 - now Thematic committee for Basic Science of the **Quantum Flagship**
- 2023 – now Thematic Committee of the Quantum Sensing of the Quantum Flagship
- 2023 – now Member of the **ESA Facility Definition Team on Ultracold Atoms**  
for the planned new international space station
- 2022 – 2021 **Greek National Representative** for the Consultation Platform on  
Quantum Space Gravimetry (QSG) for Earth Observation (EO)
- 2021 – 2022 Member of the Consultation Platform on Quantum Space Gravimetry  
(QSG) for Earth Observation (EO)
- 2020 – 2021 **Expert to the European Commission on  
Space Quantum Technologies**
- 2020 – 2021 Member of the **EU Quantum Space Gravimetry Expert Group**  
(QSGEG)
- 2021 **Invited Expert to ESA** (Cross Cutting Quantum Technologies)
- 2010 – now Member of Steering Committee  
**The Conference on Frontiers of Matter Wave Optics**

### **Refereeing and Editorship**

- **Reviewing for National Funding Bodies**
  - *National Science Foundation (NSF)*
  - *Austrian Wissenschaftsfond 2020/21*
  - *Agence Nationale de la Recherche, France 2020/21.*
- **Reviewing for International Organisations**
  - *European Metrology Research Programme ‘High-level Strategic Reviewer’ 2017*  
and Reviewer for the *in 2012 and 2015*
  - *EU Marie-Curie Individual Fellowships (2017)*
  - *EU Marie-Curie Research and Training Networks*
  - *EU Future and emerging technologies (H2020-FET-OPEN)*

- **Refereeing for Journals**

Nature, Nature Physics, Nature Communications, Physical Review Letters, Physical Review A, New Journal of Physics, Applied Physics Letters, The European Physical Journal D, Journal of Physics B, Applied Optics, Romanian Reports in Physics, Journal of Applied Physics, World Scientific Publishing, Singapore, Quantum Science and Technology, Acta Astronautica,

- **Editorship**

- Guest Editor for the *New Journal of Physics*

### ***External Examiner for Habilitations***

Bordeaux (2023)

Rapporteur for the Habilitation of Benjamin Canuel  
(Université de Bordeaux)

Paris (2023)

Rapporteur for the Habilitation of Romain Dubessy  
(Université Sorbonne)

Bordeaux (2021)

Rapporteur for the Habilitation of Baptiste Battelier  
(University of Bordeaux)

### ***Ph.D. Examinations***

Paris (2024)

External examiner for the PhD thesis of Laura Zarraoa Sardón  
(ICFO - The Institute of Photonic Sciences,  
UPC - Universitat Politècnica de Catalunya)

Brighton (2022)

External examiner for the PhD thesis of Andrew Elbourne  
(University of Sussex, Department of Physics and Astronomy)

Paris (2022)

External examiner for the PhD thesis of Célia Pelluet  
(Université Paris-Saclay, l'Institut d'Optique d'Aquitaine)

Nottingham (2022)

External examiner for the PhD thesis of Rodrigo González Escudero  
(University of Amsterdam)

Nottingham (2021)

External examiner for the PhD thesis of Jamie Johnson  
(University of Nottingham)

Crete (2021)

Member of the Ph.D. committee for the PhD of Kostas Mouloudakis  
(University of Crete)

Vienna (2017)

External Examiner for the PhD Thesis of Lukas Mairhofer  
(University of Vienna)

Canberra (2017)

External Examiner for the Thesis of Paul B. Wigley  
(Australian National University)

Crete (2015)

Member of the Ph.D. committee for the two Ph.D.s.

Crete (2014)

Member of the three member Ph.D. committee of Panagiotis Tsotsi

Hannover (2014)

External examiner for the Ph.D. of Peter Berg (U.o.Hannover)

Crete (2013)

Member of the three member Ph.D. committee of Lykourgos Bougas

Crete (2012)

Supervisor and member of the three member Ph.D. committee of Grigory Konstantinidis

Oxford (2011)

External Examiner of the doctorate (D.Phil.) of Ben Sherlock

University for Applied Sciences Emden-Leer in Germany (2011)

External Examiner of the Diploma of Waldemar Deibel

Crete (2011)

Supervisor and member of the three member Ph.D. committee of Melina Pappa

Crete (2010)

Member of the Ph.D. committee for the three Ph.D.s:  
Dimitris Sofikitis, Giorgos Katsoprinakis, and Lukas Buchmann

Paris Nord (2007)

Rapporteur for the Ph.D. thesis of Olivier Morisot (U.o.Paris 13)

### ***Membership in Professional Organisations***

2002 –	European and German Physical Societies
2013 – 2016	Mediterranean Institute of Fundamental Physics
1997 – 2000	French Physical society

### ***Thesis Supervision and Teaching Experience***

2005 –	Supervision of 7 Ph.D. students (U.o.Crete) 7 M.Sc. (granted at U.o.Crete) 1 M.Sc. (granted at Cochin University Kerala, India) 1 Diploma (Umeå Universitet, Sweden)
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1 Diploma (Univ. of A. Sciences Emden-Leer, Germany)  
5 B.Sc. students (U.o.Crete)

### **Teaching Experience**

2024	Organized and lectured at the Summer School of Frontiers in Matterwave optics, Archanes, Crete
2020-2021	Laser Physics and Medical Lasers (BME -5) Master-Level Lecture course at University of Crete (Taught jointly with Prof. Papazoglou)
2016-2018	Graduate and Undergraduate Lectures on Advanced Atomic and Molecular Physics (5 ECTS)
01/11/2004	Pieter Zeeman Prize to my diploma student Tobias Tiede for the best science diploma thesis of the University at Amsterdam in the two years 2002 and 2003
01/09/2000 – 30/09/2004	FOM-AMOLF / University of Amsterdam (Group of Prof. Walraven) Supervision of a number of trainees, diploma, and Ph.D. students
01/09/2001 – 01/09/2002	FOM-AMOLF / University of Amsterdam Official co-supervisor of a diploma student 'Bose Einstein condensation in a double magnetic well'
01/10/1997 – 31/12/1999	École Normale Supérieure, Laboratoire Kastler Brossel, Supervision of diploma and Ph.D. students
1994 – 1995	University of Cambridge, Physics Faculty, Supervision of Experimental classes II (waves)

### **Organisation of Workshops, Conferences and Summer Schools**

09/09/2024 – 12/09/2024	Organiser of the International Conference on Frontiers of matterwave optics, Chania, Crete, Greece ( <a href="#">link</a> )
02/09/2024 – 06/09/2024	Organiser of the International Summer School on Frontiers of matterwave optics, Archanes, Crete, Greece ( <a href="#">link</a> )
02/04/2024 – 06/04/2024	Co-Organiser of the workshop: The 2nd Terrestrial Very-Long-Baseline Atom Interferometry (TVLBAI) workshop in London ( <a href="#">link</a> ) @ Imperial College London
13/05/2023 – 15/05/2023	Co-Organiser of the workshop: Terrestrial Very-Long-Baseline Atom Interferometry ( <a href="#">link</a> ) @ CERN
17/05/2022 – 18/05/2022	Co-Organiser of the workshop: STE-QUEST: An M-class Cold Atom mission to probe gravity, dark matter and quantum mechanics ( <a href="#">link</a> ) @ CERN

- 23/09/2021 – 24/09/2021 Co-Organiser: Community Workshop on Cold Atoms in Space ([link](#)) @ CERN, Quantum Technologies Initiative with 39 presentations and 506 participants
- 15/06/2021 – 22/07/2021 Organiser: FOMO2021 Lecture series ([link](#))  
An online summer school for 130 PhD Students
- 22/07/2019 – 23/07/2019 Co-Organiser: CERN Workshop on Atomic Experiments for Dark Matter and Gravity Exploration Optics ([link](#))
- 17/02/2019 – 20/02/2019 Organiser: Commercializing Atom Quantum Technologies at EQTC 2019 is the first international conference of the European Quantum Flagship, Grenoble, France
- 16/04/2018 – 18/04/2018 Organiser: Atom Quantum Technologies – Quo Vadis? International Workshop with 50 participants. Crete, Greece.
- 17/09/2018 – 22/09/2018 Organiser: International Conference and Summer School on the Frontiers of Matter-Wave Optics, FOMO-2018, Crete, Greece.
- 10/09/2016 – 21/09/2016 Scientific Committee and Local Organiser of the International Conference and Summer School on the Frontiers of Matter-Wave Optics, FOMO-2016, in Arcachon, Bordeaux, France.
- 29/09/2014 – 03/10/2014 Organiser: FOMO Summer School on Matter-Wave Interferometry, in Crete.
- 06/04/2010 – 11/04/2010 Organiser: International Conference and Summer School on the Frontiers of Matter-Wave Optics, FOMO-2010, in Crete.
- 23/07/2007 – 27/07/2007 Co-Organiser: Onassis Lectures on Physics on Bose Einstein Condensation  
Speakers: W. Ketterle, A. Aspect, M. Inguscio, T. Köhler, T. Pfau, C. Salomon, S. Stringari, and W. von Klitzing.
- 06/05/2007 – 11/05/2007 Local Organisation Committee: European Conference on Atomic and Molecular Physics European Physical Society (ECAMP9)
- 03/07/2006 – 12/07/2006 Co-Organiser: Physics Summer School of the University of Crete

### **Outreach**

- 25/09/2023 Single Photon Interferometry  
EU Reseracher's FORTH, Heraklion
- 01/07/2021 Popular Article on Matterwave Optics  
*Physik in unserer Zeit* **52** 165--166 (2021)



23/11/2020	Interview on Creta Live TV on Matterwave Interferometry
21/11/2020	Video Presentation for Reseracher's Night Online
10/06/2019	Publications in newspapers, online journals, and online TV on Matterwave Rings
10/09/2015	Demonstration of single photon interferometry at the FORTH Researcher's night

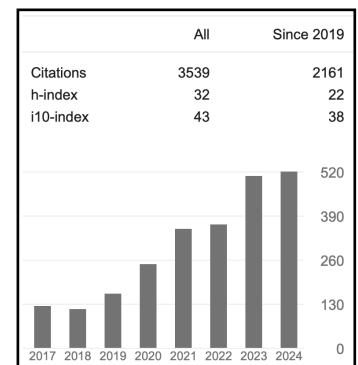
### **Conference Talks and Seminars**

(56) Athens, July 2024	IEEE International Geoscience and Remote Sensing Symposium: <i>Member of the TIE Panel on Quantum Technology for Remote Sensing</i>
(55) Benasque, Jan 2024	Atomtronics: <i>Fundamental Limits to quantum transport and matterwave optics</i>
(54) Snowbird USA, Jan.	54th Winter Colloquium on the Physics of Quantum Electronics (PQE): <i>Fundamental Limits to quantum transport and matterwave optics</i>
(53) Athens, June 2022	44th Scientific Assembly of the Committee on Space Research (COSPAR): <i>Matterwave Interferometers as Quantum Space Sensors</i>
(52) St Martin, May 2022	Finite Temperature Non-equilibrium Superfluid Systems (FINESS #7, St. Martin Germany): <i>Manipulating Matterwaves in Atomtronic Waveguides</i>
(51) IESL, Apr. 2022	Quantum Optics and Technologies in honour of Maciej Lewenstein: <i>Quantum Matterwave Optics at IESL</i>
(51) Hannover, Mar. 2022	Workshop on Prospects of Quantum Bubble Physics Bubble Rings (online, organized by Naceur Gaaloul)
(50) EQTC, Nov. 2021	European Quantum Technologies Conference (EQTC): <i>Quantum Matter-Waves in Wave-Guides</i>
(49) HPhos, Oct. 2021	Invited Talk at the Hellenic Photonics Cluster Webinar: <i>Matterwave and Space Optics on Crete</i>
(48) LPhys, July 2021	Invited Talk at The twenty-ninth annual International Laser Physics Workshop (LPHYS'21): <i>Manipulating Matter-Waves in Wave-Guides</i>
(47) Abu Dhabi, June 2021	Invited Talk at the Workshop on Atomtronics: <i>Manipulating Bose Einstein Condensates in Ring-shaped Waveguides</i>
(46) Mexico, Nov. 2020	Invited Seminar at the Quantum Information division of the Mexican Physical Society (also on <a href="#">youtube</a> ): <i>Quantum Matterwave Optics</i>
(45) Germany, Oct. 2020	Invitation to talk at the international conference "Finite Temperature Non-Equilibrium Superfluid Systems"

- (FINESSE): *Superfluidity and Conductivity in Matterwave Guides.*
- (44) Obergurgl, Feb. 2020 Invited talk at the International Conference on Quantum Optics 2020, Obergurgl, Tirol, Austria  
*Ultrasmooth Matterwave Guides*
- (43) Patras, Oct. 2019 Talk at the FORTH-Science days: *Harvesting the wave-nature of atoms for quantum technologies*
- (42) Crete, Sept. 2019 Invited Seminar at the High-Energy Physics Seminar: *Matterwave Sensors for Gravitational Waves and Dark Matter*
- (41) Benasque, May 2019 Invited plenary Talk *at the Atomtronics 2019*
- (40) Florence, April 2019 Hot topic plenary speaker  
*at the 13th European Conference on Atoms Molecules and Photons (ECAMP13)*
- (39) Florence, April 2019 Invited Talk at the  
Joint ICTP/SISSA Statistical Physics Seminar:  
*Hypersonic Transport of Bose-Einstein Condensates in a Neutral-Atom Accelerator Ring*
- (38) Chania, June 2018 International Conference on Space Optics: *Optical Beam Steering on distribution boards and its application for atom quantum experiments in space*
- (37) Heraklion, June 2018 The 1st Panhellenic Workshop on Quantum Technologies: *Quantum Sensing using Ultra-Cold Atoms*
- (36) Mykonos, Sept. 2017 Hybrid Photonics and Materials (HPM2017)  
*Matter-Wave Interferometers*
- (35) Southampton, May 2017 Physics Colloquium of the University of Southampton  
*The Power of the Ultra-Cold*
- (34) Benasque, May 2017 Atomtronics Workshop, Benasque (Spain)  
*Coherent Waveguides, Neutral Atom Accelerators and Clocks*
- (33) Mainz, March 2017 German Physical Society (DPG) Spring Meeting  
*Towards atomtronic matterwave interferometry*  
(Invited 'Main Talk')
- (32) Malta, March 2017 Quantum Space Technologies Conference  
*Atom Space Technologies*
- (31) Spetses, June 2016 International Workshop on Quantum Metamaterials & Quantum Engineering  
*Atomtronics: Quantum Technologies based on MatterWaves*
- (30) Les Houches, Jan 2016 "Advanced atomic sources and extreme cooling of atoms and molecules: techniques and applications"  
École De Physique, Les Houches  
*Ultra-Smooth MatterWave Guides and Atom Lasers*

- (29) Benasque, May 2015 Atomtronics Workshop  
*Ultra-Smooth magnetic matter-wave-guides*
- (28) Mexico, Nov. 2014 OSA Latin America Optics & Photonics Conference (LAOP) in Cancun, Mexico  
*Atom Lasers*
- (27) Hannover, Feb. 2014 Institute of Quantum Optics, University of Hannover  
*An ultra-high Brightness Matter Wave Laser*
- (26) Maratea, Sept. 2013 POLATOM Summerschool  
*Experimental Aspects of BEC*
- (25) Prague, May. 2013 22nd International Laser Physics Workshop  
*An ultra-bright atom-laser*
- (24) Greece, May. 2013 14th Conference on Physics of Light-Matter Coupling in Nanostructures (PLMCN14)  
*Ultra-bright matter-wave lasers and extremely cold thermal Atom-beams*
- (23) Greece, May. 2013 Nonlinear Schrödinger Equation: Theory and Applications; an international workshop at the Archimedes Center for Modeling, Analysis and Computation (ACMAC)  
*Matter-Wave Lasers and Thermal Atom-Beams*
- (22) Grenoble, Jan. 2013 University of Grenoble (France)  
*Breaking the Flux Limit: A novel Atom Laser using Time-Dependent Adiabatic Potentials*
- (21) Cambridge, Sept. 2012 Conference on Cold Atoms, Semiconductor Polaritons and Nanoscience POLATOM2012  
*A novel Atom Laser*
- (20) Cambridge, Nov. 2011 AMOP Seminar of the Cavendish Laboratories University of Cambridge  
*Just a few atoms: Imaging Matter-Waves*
- (19) Oxford, Nov. 2011 Atomic and Laser Physics seminar Oxford University  
*Atom Imaging of Free Matter-Waves What are the limits?*
- (18) Sarajevo, Jul. 2011 21st International Laser Physics Workshop: Seminar on Physics of Cold Trapped Atoms  
*Imaging Ultra-Low Atom Numbers for Matter-Wave Optics*
- (17) Crete, May. 2011 Conference on Cold Atoms, Semiconductor Polaritons and Nanoscience POLATOM2011  
*Imaging atoms for matter-wave interferometry*
- (16) Austria, March. 2011 International Conference on the Frontiers of Matter-Wave Optics FOMO2011  
*Atom imaging at the limits*

- (15) Athens, May. 2009 Physics Seminar of the University of Athens:  
*Bose-Einstein Condensation:  
Quantum Physics close to absolute Zero*
- (14) Crete, Oct. 2007 Engineering, Manipulation and Characterization  
of Quantum States of Matter and Light: EMALI  
*Time-Averaged Adiabatic Potentials*
- (13) Heraklion, Jul. 2006 18th Summer School on Physics:  
*Bose Einstein Condensation*
- (12) Berkeley, Oct. 2005 Finalist at the Young Scholars' Competition in the  
honour of Charles Townes, Berkeley University:  
*Guided Matterwave Interferometry*
- (11) Kyoto, July 2005 Laser Spectroscopy Workshop LPHYS'05  
*Novel Coherent Matter-Wave Guides for BEC  
interferometers*
- (10) Dresden, October 2004 International workshop on Mesoscopic Phenomena in  
Ultracold Matter: From Single Atoms to Coherent  
Ensembles: *TAP's TOP's and quantum interference:  
Physics with novel magnetic traps*
- (9) Amsterdam, April 2004 Prof. Klein Colloquium, University of Amsterdam  
*Cold Collisions: Hitting Condensates Hard*
- (8) Crete, December 2003 ITE-FORTH research seminar  
*Hydrodynamic BEC and novel Traps*
- (7) Hamburg, August 2003 12th annual international Laser Physics Workshop:  
*Quench-cooled quantum gasses*
- (6) Heidelberg, April 2003 Quantum Optics, Atomic and  
Neutron Physics Seminar  
*Bose-Einstein condensation in a  
hydrodynamic thermal cloud*
- (5) Hamburg, May 2003 Colloquium of the Institute for  
Laser-Physics, Hamburg  
*Bose-Einstein condensation in a  
hydrodynamic thermal cloud*
- (4) Lunteren, Sept. 2002 7th International Workshop on  
Atom Optics and Interferometry:  
*Formation of nonequilibrium Bose-  
Einstein condensates in elongated  
magnetic traps*
- (3) Lunteren, Nov. 2000 Plenary talk at the meeting of the atom and molecular  
physics division of the Dutch physical society:  
*Tuning whispering gallery modes: towards optical  
CQED with microspheres*
- (2) Heidelberg, March 1999 Plenary talk at the conference of the Deutsche  
Physikalische Gesellschaft (DPG):  
*A very low threshold Er<sup>3+</sup> microsphere laser*



[Google Scholar](#)

- (1) Garching, February 1999: Max-Planck Institut für Quantenoptik:  
*Microspheres and Microlasers: Towards the strong coupling regime*

## **Patents**

- (1) V. Bolpasi and W. von Klitzing  
*A double-passed injection locked tapered laser amplifier* (Greek patent 2011)

## **Selected Peer-reviewed publications**

- (54) Ioannis Drougkakis, Georgios Vasilakis, and Wolf von Klitzing  
*Precision minimally-destructive detection of ultra-cold atomic ensembles*  
[Quantum Technologies](#) : (2024) DOI:/10.1117/12.3022120
- (53) S. Abend, et al. (WK: Co-Editor)  
*Terrestrial very-long-baseline atom interferometry*  
AVS Quantum Science **6** (2024) DOI: /10.1116/5.0185291
- (52) J. Fiedler, K. Lefmann, W. von Klitzing, and B. Holst  
*Monolithic atom interferometry*  
Physical Review A **108** (2023) (2022) DOI: /10.1103/PhysRevA.108.023306
- (51) N. Gaaloul, B. Battelier, A. Bertoldi, G. Biedermann, N. Bigelow, K. Bongs, et al.  
*Research Campaign White Paper: Satellite Quantum Test of the Universality of Free Fall*  
NASA Decadal Survey (2022)
- (50) L. Amico, D. Anderson, M. Boshier, J.-P. Brantut, L.-C. Kwek, A. Minguzzi, et al.  
Colloquium: Atomtronic circuits: From many-body physics to quantum technologies  
**Reviews of Modern Physics 94:4** (2022)  
DOI: /10.1103/RevModPhys.94.041001
- (49) I. Alonso, C. Alpigiani, B. Altschul, H. Ara'ujo, G. Arduini, J. Arlt, et al.  
*Cold atoms in space: community workshop summary and proposed road-map*  
EPJ Quantum Technology **9:1** (2022) DOI: /10.1140/epjqt/s40507-022-00147-w
- (48) A. Bertoldi, K. Bongs, P. Bouyer, O. Buchmueller, B. Canuel, et al.  
*AEDGE : Atomic Experiment for Dark Matter and Gravity Exploration in Space*  
NASA Decadal Survey : (2022) DOI:
- (47) M. Ögren, G. Drougakis, G. Vasilakis, W. von Klitzing, & G. M. Kavoulakis  
*Stationary states of Bose-Einstein condensed atoms rotating in an asymmetric ring potential*  
Journal of Physics B **54:14** 145303 (2021) DOI: /10.1088/1361-6455/ac1647
- (46) I. Drougkakis, V. Tzardis, D. Pal, V. Pareek, G. Vasilakas, N. Papadakis, et al.  
*Stable and precise optical bench for space applications*  
International Conference on Space Optics - ICSO 2020, **118526R:k** (2021)  
DOI: /10.1117/12.2600319
- (45) L. Amico, M. Boshier, G. Birkel, A. Minguzzi, C. Miniatura, L.-C. Kwek, et al.  
*Roadmap on Atomtronics: State of the art and perspective*  
AVS Quantum Science **3:3** 039201 (2021) DOI: /10.1116/5.0026178

- (44) R. Kaltenbaek, A. Acin, L. Bacsardi, P. Bianco, P. Bouyer, E. Diamanti, et al.  
*Quantum technologies in space*  
 Experimental Astronomy **51**: 1677-1694 (2021) [DOI: /10.1007/s10686-021-09731-x](https://doi.org/10.1007/s10686-021-09731-x)
- (43) W. von Klitzing (invited)  
*Optik mit Materiewellen in Wellenleitern*  
 Physik in unserer Zeit **52:4** 165--166 (2021) [DOI: /10.1002/piuz.202170406](https://doi.org/10.1002/piuz.202170406)
- (42) B. Battelier, J. Berg\`e, A. Bertoldi, L. Blanchet, K. Bongs, P. Bouyer, et al.  
*Exploring the foundations of the physical universe with space tests of the equivalence principle*  
 Experimental Astronomy **51**: 1695--1736 (2021) [DOI: /10.1007/s10686-021-09718-8](https://doi.org/10.1007/s10686-021-09718-8)
- (41) G. A. Sinuco-Leon, H. Mas, S. Pandey, G. Vasilakis, B. M. Garraway, & W. von Klitzing  
*Decoherence-free radio-frequency-dressed subspaces*  
 Physical Review A **104:3** (2021) [DOI: /10.1103/PhysRevA.104.033307](https://doi.org/10.1103/PhysRevA.104.033307)
- (40) S. Pandey, H. Mas, G. Vasilakis, & W. von Klitzing  
*Atomtronic Matter-Wave Lensing*  
**Physical Review Letters** **126:17** (2021)  
[DOI: /10.1103/physrevlett.126.170402](https://doi.org/10.1103/physrevlett.126.170402)
- (39) A. Bertoldi, K. Bongs, P. Bouyer, O. Buchmueller, B. Canuel, et al.  
*AEDGE: Atomic experiment for dark matter and gravity exploration in space*  
 Experimental Astronomy **51**: 1417-1426 (2021) [DOI: /10.1007/s10686-021-09701-3](https://doi.org/10.1007/s10686-021-09701-3)
- (38) B. Canuel, S. Abend, P. Amaro-Seoane, F. Badaracco, Q. Beaufiles, et al.  
*ELGAR -- a European Laboratory for Gravitation and Atom-interferometric Research*  
 Classical and Quantum Gravity **37:22** 225017 (2020)  
[DOI: /10.1088/1361-6382/aba80e](https://doi.org/10.1088/1361-6382/aba80e)
- (37) Y. A. El-Neaj, C. Alpigiani, S. Amairi-Pyka, H. Araújo, A. Balaž, A. Bassi, et al.  
*AEDGE - Atomic Experiment for Dark Matter and Gravity Exploration in Space*  
 EPJ Quantum Technology **7:1** 6 (2020) [DOI: /10.1140/epjqt/s40507-020-0080-0](https://doi.org/10.1140/epjqt/s40507-020-0080-0)
- (36) G. Vasilakis, A. Roussou, J. Smyrnakis, M. Magiropoulos, W. von Klitzing, & G. M. Kavoulakis  
*Transition from the mean-field to the bosonic Laughlin state in a rotating Bose-Einstein condensate*  
 Physical Review A **100:2** (2019) [DOI: /10.1103/PhysRevA.100.023606](https://doi.org/10.1103/PhysRevA.100.023606)
- (35) G. M. Tino, A. Bassi, G. Bianco, K. Bongs, P. Bouyer, L. Cacciapuoti, et al.  
*SAGE : A proposal for a space atomic gravity explorer*  
 European Physical Journal D **73:11** (2019) [DOI: /10.1140/epjd/e2019-100324-6](https://doi.org/10.1140/epjd/e2019-100324-6)
- (34) G. Drougakis, K. G. Mavrakis, S. Pandey, G. Vasilakis, K. Poullos, D. G. Papazoglou, et al.

- (33) I. Drougkakis, K. G. Mavrakis, K. Poullos, G. Vasilakis, D. G. Papazoglou, & W. von Klitzing  
*Optical beam steering on distribution boards and its application for atom quantum experiments in space*  
International Conference on Space Optics --- ICSO 2018 : (2019) [DOI: /10.1117/12.2536102](https://doi.org/10.1117/12.2536102)
- (32) G. A. Sinuco-Leon, B. M. Garraway, H. Mas, S. Pandey, G. Vasilakis, et al.  
Microwave spectroscopy of radio-frequency-dressed Rb87  
Physical Review A **100**:5 (2019) [DOI: /10.1103/physreva.100.053416](https://doi.org/10.1103/physreva.100.053416)
- (31) Saurabh Pandey, Hèctor Mas, Giannis Drougakis, Premjith Thekkepatt, Vasiliki Bolpasi, Georgios Vasilakis, Konstantinos Poullos, and Wolf von Klitzing  
*Hypersonic Bose--Einstein condensates in accelerator rings*  
**Nature** **570**:7760 205–209 (2019) ([doi.org/10.1038/s41586-019-1273-5](https://doi.org/10.1038/s41586-019-1273-5))
- (30) A. Roussou, J. Smyrnakis, M. Magiropoulos, N. K. Efremidis, W. von Klitzing, and G. M. Kavoulakis  
*Fragility of the bosonic Laughlin state*  
Physical Review A **99** (2019) ([Link](#))
- (29) Saurabh Pandey, Hector Mas, Giannis Drougakis, Kostas G. Mavrakis, Mikis Mylonakis, Georgios Vasilakis, Vasiliki Bolpasi, and Wolf von Klitzing  
*Antireflection coated semiconductor laser amplifier for Bose-Einstein condensation experiments*  
AIP Advances **8**:9 095020 (2018) ([Link](#))
- (28) Mikis Mylonakis, Saurabh Pandey, Kostas G. Mavrakis, Giannis Drougakis, Georgios Vasilakis, Dimitris G. Papazoglou, and Wolf von Klitzing  
*Simple precision measurements of optical beam sizes*  
Applied Optics **57**:33 9863 (2018) ([Link](#))
- (27) P Navez, S Pandey, H Mas, K Poullos, T Fernholz, and W von Klitzing  
*Matter-wave interferometers using TAAP rings*  
New Journal of Physics **18**:7 075014 (2016) ([Link](#))
- (26) V. Bolpasi, W. von Klitzing  
*Adiabatic Potentials and Atom Lasers*  
Rom. Rep. Phys. **67** 295 (2015). ([link](#)) ([pdf](#))
- (25) V. Bolpasi, N.K. Efremidis, M. J. Morrissey, P. Condyllis, D. Sahagun, M. Baker, W. von Klitzing  
*An ultra-bright atom laser*  
New Journal of Physics **16**: 033036 (2014) ([link](#))  
*Selected by the Editors for the “Highlights of 2014” collection of the New Journal of Physics*
- (24) D. Saharan, V. Bolpasi, and W. von Klitzing  
*A Simple and Highly Reliable Laser System for Cold Atom Experiments*  
Optics Communications **290** 110-114 (2013) ([link](#))



- (23) Markus Arndt, Aigars Ekers, Wolf von Klitzing, and Hendrik Ulbricht  
*Focus on Matterwave Interferometry*,  
New Journal of Physics **14** 125006 (2012) ([link](#))
- (22) V. Bolpasi, J. Grucker, M. J. Morrissey, and W. von Klitzing  
*Gradient-Cancelling Ioffe-Pritchard trap for Bose-Einstein Condensation experiments*  
Journal of Physics B **45:23** 235301 (2012) ([link](#))  
*Selected by Editorial Board of Journal of Physics B as **Highlight of the Year** 2012* ([link](#))
- (21) G.O. Konstantinidis, M. Pappa, G. Wikström, P.C. Condylis, M. Baker, O. Morizot, and W. von Klitzing  
*Absolute Atom Number Calibration in Absorption Imaging at Ultra-Low Atom Numbers*  
Cent. Europ. J. Phys. **1-5** (2012) ([link](#))
- (20) L. Bougas, G.E. Katsoprinakis, W. von Klitzing, J. Sapirstein, and T. P. Rakitzis  
*Cavity-Enhanced Parity-Nonconserving Optical Rotation in Metastable Xe and Hg*  
Physical Review Letters **108** 210801 (2012) ([link](#))  
(selected for [Editors' Suggestions](#))
- (19) M. Pappa, P.C. Condylis, G.O. Konstantinidis, V. Bolpasi, A. Lazoudis, O. Morizot, D. Sahagun, M. Baker, W. von Klitzing  
*Ultra-Sensitive Atom Imaging for Matter-Wave Optics*  
*An invited article for the Focus Issue on Matter-Wave Optics*  
New Journal of Physics **13:11** 115012 (2011) ([link](#))
- (18) V. Bolpasi and W. von Klitzing  
*Double-pass tapered amplifier diode laser with an output power of 1 W for an injection power of only 200  $\mu$ W*  
Review of Modern Instruments **81** 113108 (2010) ([link](#))
- (17) I. Lesanovsky and W. von Klitzing  
*Time-Averaged Adiabatic Potentials: Versatile traps and waveguides for ultracold quantum gases*  
Physical Review Letters **99** 083001 (2007) ([link](#))
- (16) I. Lesanovsky and W. von Klitzing  
*Spontaneous Emergence of Angular Momentum Josephson Oscillations in Coupled Annular Bose-Einstein Condensates*  
Physical Review Letters **98** 050401 (2007) ([link](#))
- (15) Ch. Buggle, J. Leonard, W. von Klitzing and J.T.M. Walraven  
*Bose-Einstein condensates studied with a linear accelerator.*  
Laser Spectroscopy, E.A. Hinds, A. Ferguson and E. Riis (Eds.), **199-206**, World Scientific, Singapore (2005)
- (14) Ch. Buggle, P. Pedri, W. von Klitzing, and J.T.M. Walraven  
*Shape oscillations in nondegenerate Bose gases: Transition from the collisionless to the hydrodynamic regime.*  
Physical Review A **72**, 043610 (2005) ([link](#))





- (13) Ch. Buggle, J. Leonard, W. von Klitzing, and J.T.M. Walraven  
*Interferometric Determination of the s and d-Wave Scattering Amplitudes in Rb-87* Physical Review Letters **93**, 173202 (2004) ([link](#))  
 Reviewed in: Kennislink (5. Nov. 2005), FOM news and Physics News Update (#707)
- (12) Ch. Buggle, I. Shvarchuck, W. von Klitzing, and J.T.M. Walraven  
*Hydrodynamic clouds and Bose-Einstein condensation*  
 Journal De Physique IV **116**, 211-217 (2004) ([link](#))
- (11) S. Stry, L. Hildebrandt, J.R. Sacher, Ch. Buggle, M. Kemmann, and W. von Klitzing  
*Compact tuneable diode laser with diffraction-limited 1 Watt for atom cooling and trapping*  
 SPIE: High-Power Diode Laser Technology and Applications II -- Volume **5336** (2004) ([link](#))
- (10) T.G. Tiecke, M. Kemmann, Ch. Buggle, I. Shvarchuck, W. von Klitzing, and J.T.M. Walraven  
*Bose-Einstein Condensation in a magnetic double-well potential*  
 Journal of Optics B (special issue on Cold Atoms), **5** S119-S123 (2003) ([link](#))  
 (“One of the most downloaded articles of the Journal of Optics in 2003”)
- (9) I. Shvarchuck, Ch. Buggle, D.S. Petrov, M. Kemmann, T.G. Tiecke, W. von Klitzing, G.V. Shlyapnikov, and J.T.M. Walraven  
*Focusing of Bose-Einstein condensates in free flight*  
 in Interactions in Ultracold Gases: From Atoms to Molecules, Matthias Weidemuller & Claus Zimmermann (Editors), J. Wiley, New York (2003) ([link](#))
- (8) I. Shvarchuck, C. Buggle, D. S. Petrov, M. Kemmann, W. von Klitzing, G. V. Shlyapnikov and J. T. M. Walraven  
*Hydrodynamic behavior in expanding thermal clouds of Rb-87*  
 Physical Review A **68** 063603 (2003) ([link](#))
- (7) I. Shvarchuck, Ch. Buggle, D.S. Petrov, K. Dieckmann, M. Zielonkovski, M. Kemmann, T.G. Tiecke, W. von Klitzing, G.V. Shlyapnikov, and J.T.M. Walraven  
*Bose-Einstein condensation into non-equilibrium states studied by condensate focusing*  
 Physical Review Letters 89-27, 270404 (2002) ([link](#))  
 Public Reviews: Physics News Update (#620)
- (6) Wolf von Klitzing, Romain Long, Vladimir S. Ilchenko, Jean Hare, and Valérie Lefèvre-Sequin  
*Tunable whispering gallery modes for spectroscopy and CQED experiments*  
 New Journal of Physics **3**, 14.1-14.14 (2001) ([link](#))
- (5) Wolf von Klitzing, Romain Long, Vladimir S. Ilchenko, Jean Hare, and Valérie Lefèvre-Sequin  
*Frequency tuning of the whispering-gallery modes of silica microspheres for cavity quantum electrodynamics and spectroscopy*  
 Optics Letters **26:3** 166-168 (2001) ([link](#))
- (4) Wolf von Klitzing, E. Jahier, R. Long, F. Lissillour, V. Lefèvre-Sequin, J. Hare, J.-M. Raimond, S. Laroche



*Very low threshold green lasing in microspheres by up-conversion of IR photons*  
Journal of Optics B **2** 204–206 (2000) ([link](#))

- (3) W. von Klitzing, E. Jahier, R. Long, F. Lissillour, V. Lefèvre-Seguin, J. Hare, J.-M. Raimond, S. Haroche  
*Green lasing in microspheres at very low pump powers*  
ICSSUR, 243-246 (1999) ([link](#))
- (2) W. von Klitzing, E. Jahier, R. Long, F. Lissillour, V. Lefèvre-Seguin, J. Hare, J.-M. Raimond, S. Laroche  
*Very low threshold lasing in Er<sup>3+</sup> doped ZBLAN microspheres*  
Electronics Letters **35:20** 1745-1746 (1999) ([link](#))
- (1) W. von Klitzing, B. Butcher  
*Practical issues in the development of saturation spectroscopy at ultra-high resolution*  
Measurement Science and Technology **9** 417-421 (1998) ([link](#))

### **Lectures at Summer Schools**

- (3) Maratea, Sept. 2013      Sixth International School of Nanophotonics and Photovoltaics (ISNP-13) & PLATOM Summer School:  
*Experimental aspects of Bose-Einstein Condensation in atoms*
- (2) Heraklion, Jul. 2007      Onassis Lectures on Physics on Bose Einstein Condensation in honour of Prof Ketterle:  
*Trapping and Manipulating Neutral Atoms*
- (1) Heraklion, Jul. 2006      18th Summer School on Physics:  
*Bose Einstein Condensation*