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PERSONAL INFORMATION

Date of birth: 20 May 1968 | Place of birth: Kassel, Germany | Nationality: German

ACADEMIC APPOINTMENTS

ALEXANDER VON HUMBOLDT PROFESSOR
DIRECTOR OF THE INSTITUTE OF THEORETICAL PHYSICS, ULM UNIVERSITY
FROM OCTOBER 2009

PROFESSOR (PART TIME 10%) THE BLACKETT LABORATORY, IMPERIAL COLLEGE LONDON
OCTOBER 2009 – SEPTEMBER 2015

DIRECTOR, QUANTUM INFORMATION SCIENCE PROGRAMME OF THE INSTITUTE FOR MATHEMATICAL SCIENCES IMPERIAL COLLEGE LONDON
APRIL 2005 – SEPTEMBER 2009

PROFESSOR OF QUANTUM PHYSICS (CHAIR) IMPERIAL COLLEGE LONDON
OCTOBER 2003 – SEPTEMBER 2009

SENIOR LECTURER (ASSOCIATE PROFESSOR) IMPERIAL COLLEGE LONDON
OCTOBER 2001 – SEPTEMBER 2003

LECTURER (ASSISTANT PROFESSOR WITH TENURE) IMPERIAL COLLEGE LONDON
JANUARY 1998 – SEPTEMBER 2001

FEODOR-LYNEN FELLOW (POSTDOC) IMPERIAL COLLEGE LONDON
JANUARY 1995 – DECEMBER 1997

HIGHER EDUCATION

1994 **GÖTTINGEN UNIVERSITY, GERMANY**
DR. RER. NAT.

Thesis: “Novel Structures in the emission spectrum of laser driven atoms”. Advisor: Prof. Dr. G.C. Hegerfeldt. Grade Thesis: Magna Cum Laude. Grade Viva: Summa Cum Laude

1992 **GÖTTINGEN UNIVERSITY, GERMANY**
DIPL. PHYS.

Thesis: “Coherence effects in the photon statistics of single atoms”. Advisor: Prof. Dr. G.C. Hegerfeldt. Thesis and Viva were awarded a special distinction for highest achievement

PERSONAL PRIZES & RECOGNITIONS

2020 Web of Science Highly Cited Researcher

2020 Finalist of the Horizon Impact Award as part of the DIADEMS consortium

2019 Ranked 34th worldwide in the Subject Category ‘General Physics’ for “career-long” citation impact based on survey of SCOPUS data

2019 ERC Synergy Grant HyperQ

2019 Reinhart Koselleck Project Award of the German Research Council

2019 Web of Science Highly Cited Researcher

2018 Web of Science Highly Cited Researcher

2017 Ranked 59th worldwide in the Subject Category ‘General Physics’ for “career-long”

citation impact based on survey of SCOPUS data
 2017 Web of Science Highly Cited Researcher
 2015 Visiting Professor, Faculty of Natural Sciences, Imperial College London, London, UK
 2015 Guest Professor, Faculty of Natural Sciences, Huazhong University of Science and Technology, Wuhan, China
 2015 Institute of Physics in Ireland Prestige Speaker
 2014 Award of Research Building & Center for Quantum-BioSciences (Founder & Managing Director)
 2012 ERC Synergy Grant BioQ (Corresponding PI)
 2012 The Max Born Medal and Prize (Bilateral Award of the DFG and the IOP)
 2011 Outstanding Referee (American Physical Society)
 2009 Alexander von Humboldt Professor (Alexander von Humboldt Foundation)
 2008 Offer of Chair, Karlsruhe University (Declined)
 2008 Clifford Paterson Medal and Lecture (The Royal Society)
 2006 Royal Society Wolfson Research Merit Award (The Royal Society)
 2004 The Maxwell Medal and Prize (The UK Institute of Physics)
 2004 Fellow of the UK Institute of Physics
 2003 The Royal Society Leverhulme Trust Senior Research Fellowship
 1995 Feodor-Lynen Fellowship (Alexander von Humboldt Foundation)
 1992 PhD Fellowship (The State of Lower Saxony)

RESEARCH PROGRAMME

My group conducts cutting edge research in a wide variety of areas spanning Quantum Information Science, Quantum Optics, Entanglement Theory, Quantum Sensing & Metrology and Quantum Effects in Biology. In this work we carry out fundamental theory, explore its implications for experimental physics and collaborate extensively with experimental teams to achieve realisations of our theories.

PUBLICATIONS & PRESENTATIONS

Published 389 papers in international refereed journals, including more than 120 in Science, Nature & Nature family, Physical Review Letters and 3 Reviews of Modern Physics. Editor of first monograph in the field of Quantum Effects in Biology. ISI Highly Cited Researcher.

31681 citations, H-Index 85 (Source: Web of Science Core Collection, 30th April 2020).
 48364 citations, H-Index 102 (Source: Google Scholar, 30st April 2020)

Personally presented 245 invited and plenary lectures at international conferences, 177 seminars and colloquia and 24 summer schools and postgraduate courses abroad.

7 patents, all sold or licensed to companies.

PHD SUPERVISION & POSTDOCS

I have completed the supervision of 33 PhD theses as principal or as co-supervisor and I have employed and mentored 45 postdocs (contracts completed).

Currently, I am supervising 19 PhD students and 9 postdoctoral researchers along with 3 Masters students.

36 former PhD students (6) and postdoctoral researchers (30) from my group are now holding permanent academic appointments (Full Professor, Associate Professor, Assistant Professor with tenure).

OTHER ACTIVITIES & ACHIEVEMENTS

Leadership of major collaborative research projects

Since 2019 PI, ERC Synergy grant HyperQ, €9,400,000

- Since 2017 Deputy-Coordinator of the CRC-1279 “Exploiting the Human Peptidome for Novel Antimicrobial and Anticancer Agents”
- Since 2016 Coordinator of EU Project HYPERDIAMOND with a budget of €5,073,550
- Since 2015 Co-Founder of NVision Imaging Technologies GmbH
- Since 2014 Principal applicant, Founder and Managing Director for the Center of Quantum-Biosciences and the associated research building with funding of €26.96 Million.
- 2013 – 2019 Corresponding PI of ERC Synergy grant Diamond Quantum Devices and Biology (BioQ) at Ulm University with funding of €10.3 Million.
- 2009 – 2009 Founder and first Director, Doctoral Training Center on Controlled Quantum Dynamics at Imperial College with funding of £7 Million.
- 2005 – 2010 Co-coordinator (with I. Walmsley) of EU Integrating project “Qubit Applications” (QAP) with funding volume of €9.9 Million.
- 2004 – 2005 Co-proposer and Theory Director of the EPSRC Interdisciplinary Research Collaboration on Quantum Information Processing with funding of £10 Million.
- 1999 – 2003 Founder and Chair, European Science Foundation Programme “Quantum Information Theory and Quantum Computation” with funding of €500,000.

Outreach

- 2007 Initiated QILive – Live Streaming Service for Seminars at the Institute of Mathematical Sciences

Advisory Boards & Steering Committees

- 2018 - Member of the Strategic Advisory Agenda Working Group, Quantum Technologies Flagship
- 2016- Member, ESF College of Expert Reviewers
- 2014- Member, Advisory Board, EU Coordinating Action QUTE
- 2014 Chair, ESF FarQBio Forward Look on Quantum Biology
- 2010 – Member, International Advisory Board, Doctoral Training Center on Controlled Quantum Dynamics, Imperial College London
- 2009 – 2014 Member, Advisory Board, EU Coordinated Action QUIE2T
- 2009 – 2010 Member, International Advisory Board, Institute for Mathematical Sciences, Imperial College
- 2009 – 2013 Member, Steering Committee, EU Integrating Project Q-Essence
- 2005 – 2009 Newton Institute Correspondent, Cambridge, UK
- 2004 – Krzyzowa Initiative for a European Quantum Information Research Network
- 2001 Chair, Focus Group for the Forward Look at Opportunities in Atomic & Molecular Physics in the UK
- 2000 – 2002 Member, Steering Committee, EU Project EQUIP

Scientific Journals

- 2017 – Board of Reviewing Editors, Member, Science
- 2016 – 2019 Editorial Board Member, Quantum Science and Technology
- 2015 – 2017 Editorial Board Member, Reports on Mathematical Physics
- 2014 – 2017 Editorial Board Member, Advances in Physics: X
- 2014 – 2016 Divisional Associate Editor, Physical Review Letters
- 2014 – Editorial Board Member, Contemporary Physics
- 2006 – 2012 Editorial Board Member, Proceedings of the Royal Society
- 2005 – 2007 Editorial Board Member, Physical Review A
- 2003 – 2013 Associate Editor, Contemporary Physics
- 2001 – 2011 Editorial Board Member, New Journal of Physics

Conferences

- Co-Founder of the annual QION conference series in 2009
- Co-Founder of the annual QDIAMOND conference series in 2012
- Founding Member of the conference board of the QuEBs conference series in 2009

Organizer/Co-organizer of 30 international conferences
Member/Chair of programme committee of 61 international conferences

Visiting Professorships

2015 – Visiting Professor, Imperial College London, London, UK.
2015 – 2018 Guest Professor, Faculty of Natural Sciences, Huazhong University of Science and Technology, Wuhan, China
2010 – 2011 Senior Research Visitor, Keeble College, University of Oxford, UK
2004 – 2009 Visiting Professor at the School of Physics, Astronomy and Mathematics, University of Hertfordshire, UK

PUBLICATIONS

10 Selected Publications

V. Vedral, M.B. Plenio, M.A. Rippin, and P.L. Knight. *Quantifying entanglement*. Phys. Rev. Lett. **78**, 2275 – 2279 (1997). Google Scholar Citations: 2103

S.F. Huelga, C. Macchiavello, T. Pellizzari, A.K. Ekert, M.B. Plenio and J.I. Cirac. *On the improvement of frequency standards using quantum entanglement*. Phys. Rev. Lett. **79**, 3865 – 3868 (1997). Google Scholar Citations: 925

V. Vedral and M.B. Plenio. *Entanglement measures and purification procedures*. Phys. Rev. A **57**, 1619 – 1633 (1998). Google Scholar Citations: 1639

M.B. Plenio, S.F. Huelga, A. Beige, and P.L. Knight. *Cavity Loss Induced Generation of Entangled Atoms*. Phys. Rev. A **59**, 2468 – 2475 (1999). Google Scholar Citations: 600

M.B. Plenio. *The logarithmic negativity: A full entanglement monotone that is not convex*. Phys. Rev. Lett. **95**, 090503 (2005). Google Scholar Citations: 949

M.J. Hartmann, F.G.S.L. Brandão and M.B. Plenio. *Strongly Interacting Polaritons in Coupled Arrays of Cavities*. Nature Physics **2**, 849 (2006). Google Scholar Citations: 947

M.B. Plenio and S.F. Huelga. *Dephasing assisted transport: Quantum networks and biomolecules*. New J. Phys. **10**, 113019 (2008). Google Scholar Citations: 1014

F. Caruso, A.W. Chin, A. Datta, S.F. Huelga and M.B. Plenio. *Highly efficient energy excitation transfer in light-harvesting complexes: The fundamental role of noise-assisted transport*. J. Chem. Phys. **131**, 105106 (2009). Google Scholar Citations: 666

A. Rivas, S.F. Huelga and M.B. Plenio. *Entanglement and non-Markovianity of quantum evolutions*. Phys. Rev. Lett. **105**, 050403 (2010). Google Scholar Citations: 870

T. Baumgratz, M. Cramer and M.B. Plenio, *Quantifying Coherence*. Phys. Rev. Lett. **113**, 140401 (2014). Google Scholar Citations: 1582