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CURRICULUM VITAE

Personal Details

Name	Prof. Howard M. Wiseman
Address	Centre for Quantum Dynamics, Griffith University, Nathan Q 4111, Australia
Phone	+61 7 3735 7279
Fax	+61 7 3735 4426
E-mail	H.Wiseman@griffith.edu.au
Web page	https://howardwiseman.me , https://experts.griffith.edu.au/18725-howard-wiseman
Year of Birth	1968
Nationality	Australian

Education

1992-4	Doctorate of Philosophy in Physics The University of Queensland Thesis title: <i>Quantum Trajectories and Feedback</i> Supervisor: A/Prof. G. J. Milburn Submitted: May 17, 1994; Awarded 22 November 1994.
1988-91	Bachelor of Science with First Class Honours (Physics), The University of Queensland

Substantive Positions Held

Jan. 2025–	Professor, School of Environment and Science, Griffith U.
Jan. 2010–Jan. 2025	Professor, Centre for Quantum Dynamics, Griffith U.
Dec. 2004–Jan. 2010	Professor & Federation Fellow, Centre for Quantum Dynamics, Griffith U.
July 2004–Nov. 2004	Professor, School of Science, Griffith U.
Jan. 2004–June 2004	Assoc. Professor & QEII Research Fellow, School of Science, Griffith U.
Jan. 2001–Dec. 2003	Senior Lecturer & QEII Research Fellow, School of Science, Griffith U.
July 1999–Dec. 2000	Lecturer & QEII Research Fellow, School of Science, Griffith U.
May 1999–July 1999	Research Fellow (ARC), Dept. of Physics, U. of Queensland
May 1996–May 1999	Postdoc. Research Fellow (ARC), Dept. of Physics, U. of Queensland.
May 1994–May 1996	Postdoc. Research Fellow, Dept. of Physics, Auckland U.

Other Positions Held

Jan. 2025–	Professor Stylites, Queensland Quantum and Advanced Technology Research Institute (QUATRI), Griffith U.
Jan. 2021–	Executive Committee Member, Centre for Quantum Computation and Communication Technology (ARC CoE)
Oct. 2018–	Founding Faculty Member, John Bell Institute for the Foundations of Physics
July 2018–	Node Manager and Program Manager, Centre for Quantum Computation and Communication Technology (ARC CoE)
Aug. 2016–	Affiliated Scholar, Institute for Quantum Studies, Chapman University
July 2012–June 2018	Honorary Professor, Faculty of Science, University of Queensland
April 2012–March 2017	Coördinator, Physical Sciences (Area of Strategic Investment), Griffith U.
Jan. 2011–June 2018	Executive Committee Member, Node Manager, and Program Manager, Centre for Quantum Computation and Communication Technology (ARC CoE)
Feb. 2007–Jan. 2025	Director, Centre for Quantum Dynamics, Griffith U.
Jan. 2003–Dec. 2010	Program Manager, Centre for Quantum Computer Technology (ARC CoE)
July 1999–June 2012	Honorary Research Advisor, Dept. of Physics, University of Queensland

Professional Affiliations

2018–24	Fellow, Institute of Physics
2017–24	Member, International Arthurian Society
2017–	Fellow, OSA / Optica (formerly the Optical Society of America)
2013–16	Member, Optical Society of America
2011–	Fellow, American Physical Society, Division of Quantum Information
2008–	Fellow, Australian Academy of Science
2002–10	Member, American Physical Society, Division of Laser Science
2002–17	Member, Institute of Physics
1992–2009	Member, Australian Optical Society
1990–	Member, Australian Institute of Physics

Awards and Fellowships

International Award (Joint)

- 2023 The [Paul Ehrenfest Award for Best Paper in Quantum Foundations](#) (for papers 2018-2022) by IQOQI-Wien under the auspices of the Österreichische Akademie der Wissenschaften “to the authors of three papers for their work on extended Wigner’s friend theorems”, one of which was: Kok-Wei Bong, Anibal Utreras-Alarcón, Farzad Ghafari, Yeong-Cherng Liang, Nora Tischler, Eric G. Cavalcanti, Geoff J. Pryde and [Howard M. Wiseman](#), “A strong no-go theorem on the Wigner’s friend paradox” Nature Physics (2020).

Elected Life Fellowships

- 2017 Election as Fellow of OSA (the Optical Society of America) (0.4% of membership per year)
 2012 Election as Fellow of the American Physical Society (0.5% of membership per year)
 2008 Election as Fellow of the Australian Academy of Science (16 per year)

National Medals

- 2021 The Walter Boas Medal and Prize of the Australian Institute of Physics (for physics research carried out in the preceding four years).
 2003 The Malcolm McIntosh Medal and Prize for Physical Scientist of the Year (under 35), Prime Minister’s Science Awards
 2003 The Pawsey Medal and Prize of the Australian Academy of Science, for Physicists under 40
 1995 The Bragg Medal for best Ph.D. thesis of preceding year, Australian Institute of Physics

Other Awards and Fellowships

- 2024 The Vice Chancellor’s Research Excellence Award for Team Research, as leader of the “Quantum Foundations” team, Griffith U.
 2022 One of the Reviewers of the Year from *npj Quantum Information* (2022 Impact Factor 12.3)
 2019 School of Environment and Science (Griffith University) Sustainability Award.
 2018 Fellowship of the Institute of Physics (UK)
 2015-16 Outstanding referee commendations from *New Journal of Physics* (2013 Impact Factor: 3.7)
 2012 The Griffith Media Award for Outstanding Communication of Research, Griffith U.
 2011 The Vice Chancellor’s Research Excellence Award for Team Research, as leader of the “Quantum Information Science” team, Griffith U.
 2009 Outstanding referee award from *American Physical Society* (0.25% per year)
 2006 *Cosmos* magazine inaugural “Bright Sparks” award for young Australian scientists under 45 (one of 10)

- 2004 Federation Fellowship, Australian Research Council (~20 per year, \$1.5M for 5 years)
- 2001 The Excellence in Supervision Award, Griffith University Postgraduate Students Association
- 1999 Australian Research Council QEII Research Fellowship
- 1996 Australian Research Council Postdoctoral Research Fellowship
- 1994 The Postgraduate Student Prize, Australian Optical Society
- 1991 University of Queensland Medal
- 1991 The Duncan McNaughton Scholarship to undertake Honours Science, U. of Queensland
- 1990 Summer Vacation Scholarship, Theoretical Physics, Australian National University
- 1989 The Priest Memorial Prize for Applied Mathematics, University of Queensland

Evidence of Scholarly Contributions

Membership of Editorial Boards for Refereed Journals / Series

- 2020–24 *Physical Review X – Quantum* (APS) (2023 Impact Factor 9.7)
 2012–18 *Physical Review X* (APS) (2017 Impact Factor: 14.4)
 2010– *Quantum Science and Technology* book series (Springer)
 2008–11 *Quantum Information Processing* (Springer) (2010 Impact Factor: 2.1)
 2002–07 *Physical Review A* (APS) (2005 Impact Factor: 3.0)

Refereeing for Journals or Publishing Houses / Societies

- 2021– Scientific Research Publishing (SciRP).
 2020– Multidisciplinary Digital Publishing Institute (MDPI).
 2019– SciPost
 2018– Quantum [journal]
 2018– Studies in History and Philosophy of Modern Physics [journal]
 2015– CSIRO publishing.
 2013– Royal Society of London.
 2011– Optical Society of America.
 2011– International Federation of Automatic Control.
 2009– American Association for the Advancement of Science.
 2007– Institute of Electrical and Electronics Engineers (IEEE).
 2007– American Association of Physics Teachers.
 2006– National Academy of Sciences.
 2006– Nature Publishing Group.
 2006– British Society for the Philosophy of Science.
 2003– Rinton Press.
 2000– Kluwer Academic Publishers.
 1998– European Physical Society / European Optical Society.
 1997– Taylor and Francis Publishing.
 1997– Institute of Physics Publishing.
 1996– Elsevier Science.
 1993– American Physical Society.

Invited Talks at International Meetings

- 2024 [Observing a Century of Quantum Mechanics](#) 18–21 December, IISER-Kolkata, India [virtual appearance by me and some others].
- 2024 [Siam Quantum Science and Technology](#) 1–4 December, Krabi, Thailand.
- 2024 [Emergence of Classicality: New Perspectives on Measurements in Quantum Theory](#) 15–19 July, Trinity College Dublin.
- 2024 [Foundations of Quantum Physics Beyond Bell: Celebrating 60 years of Bell's theorem](#) 15–19 April, Les Diablerets, Switzerland.
- 2024 [International Conference on Photonics, Quantum Information, and Quantum Communication](#) (part of BoseStats@100), Jan 29 – Feb 2, S. N. Bose Centre for Basic Sciences, Kolkata, India.
- 2023 Conference in Celebration of Yakir Aharonov's 90th Birthday, 11–18 August, Chapman University, Los Angeles.
- 2023 [Central European Workshop on Quantum Optics](#) 3–7 July, Milan.
- 2023 [Quantum Information and Probability: from Foundations to Engineering \(QIP23\)](#), 13–16 June, Linnaeus University, Växjö, Sweden.
- 2023 [54th Symposium on Mathematical Physics](#), 8–11 June, Toruń, Poland
- 2023 **Plenary** talk at Summer School on [Quantum Information and Quantum Technology](#), 8 May–15 June, IISER-Kolkata, India [hybrid; virtual for me].
- 2022 [Conference on Quantum Non-Markovianity](#), 7–10 Dec., Newcastle, Australia.
- 2022 [Laws of Nature Conference 2022 remembering Detlef Dürr](#), August 8–12, Munich.
- 2022 **Plenary** talk at [Frontiers of Quantum and Mesoscopic Thermodynamics](#), 1–6 August, Prague.
- 2022 Panelist at [Mind and Agency in the Foundations of Quantum Physics](#), 31 May–3 June, Chapman University, USA [virtual appearance by me and some others]
- 2022 **Opening** talk at [International Conference on Quantum Information and Foundations](#), 14–24 February, IISER Kolkata, India [virtual].
- 2021 *Quantum Engineering: Fundamental Aspects to Applications*, 3–5 November, Lyon [virtual appearance by me and some others].
- 2021 **Keynote** talk at *Quantum Technology Research Initiative* conference, 16–17 September, Thailand [virtual].
- 2021 NASA Quantum Information Sciences Conference, August, 17-19, 2021 [virtual].
- 2021 **Keynote** talk at *Central European Workshop on Quantum Optics* Online event, 28–30 June [virtual].
- 2021 Summer School on *Quantum Information and Quantum Technology*, 14 June–14 July, IISER Kolkata, India [virtual].
- 2021 American Physical Society *March Meeting*, Keithley Prize Session (metrology), 15–19 March, [virtual].
- 2021 Centre for Quantum Technologies 13th annual Symposium, 7 January, Singapore [virtual].
- 2020 Workshop: *Is Quantum Theory exact? Exploring Quantum Boundaries*, 10–11 December, Frascati, Italy [virtual].

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- 2020 Workshop on *Agency at the Interface of Quantum and Complexity Science*, 13–16 January, Singapore.
 - 2019 *Coherence and Quantum Optics XI*, 4–8 August, Rochester, New York.
 - 2019 **Plenary** talk at XVI International Conference on *Quantum Optics and Quantum Information* May 13-17, Minsk, Belarus.
 - 2019 **Opening** talk at *Quantum Measurement: Fundamentals, Twists, and Applications*, 20 April – 4 May, ICTP, Trieste, Italy.
 - 2019 *Time and Fundamentals of Quantum Mechanics*, January 28–31, Weizmann Institute of Science, Rehovot, Israel.
 - 2018 *Cosmology and Consciousness VII*, “Observation and Reality”, Gangtok, Sikkim, India.
 - 2018 **Plenary** talk at 18th *Asian Quantum Information Science* Conference, Nagoya.
 - 2018 Workshop on *Principles and Applications of Control in Quantum Systems*, Paris.
 - 2018 **Keynote** talk at *Quantum Frontiers and Fundamentals*, Raman Research Institute, Bangalore.
 - 2017 *Emergent Quantum Mechanics 4*, including the *David Bohm Centennial* celebration, University of London.
 - 2017 **Opening Plenary** talk at International Conference on *Squeezed States and Uncertainty Relations*, Jeju, Korea.
 - 2017 *5th International Summer School in Philosophy of Physics*, Saig, Germany.
 - 2017 **Plenary** talk at *Frontiers of Quantum and Mesoscopic Thermodynamics*, Prague.
 - 2017 American Physical Society *March Meeting*, New Orleans.
 - 2017 Workshop on *Interdisciplinary Frontiers of Quantum and Complexity Science*, Singapore.
 - 2016 **Opening keynote** talk at 4th *Australia–China Quantum Control Workshop*, USTC, Hefei.
 - 2016 *Hong Kong Workshop on Quantum Information and Foundations*, Hong Kong.
 - 2015 Workshop on *Quantum Nonlocality, Causal Structures and Device-Independent Quantum Information*, Tainan, Taiwan.
 - 2015 *Asia-Pacific Conference & Workshop on Quantum Information Science*, Auckland.
 - 2015 **Keynote** talk at *Emergent Quantum Mechanics 3*, Vienna.
 - 2015 **Plenary** talk at 22nd *Central European Workshop on Quantum Optics*, Warsaw.
 - 2015 **Plenary talk** at 14th International Conference on *Squeezed States and Uncertainty Relations*, Sopot, Poland.
 - 2015 American Physical Society *March Meeting*, San Antonio, Texas.
 - 2015 **Plenary** talk at 17th *Southwest Quantum Information Technology Workshop*, Berkeley.
 - 2015 **Opening** talk at *Nonlinear Physics at the Nanoscale: A Cross-Fertilization on Stochastic Methods*, Rotorua.
 - 2014 Isaac Newton Institute Workshop on *Quantum Control Engineering*, Cambridge.
 - 2014 8th Workshop on *Principles and Applications of Control in Quantum Systems*, Cambridge.
 - 2014 *Quantum [Un]speakables II – 50 years of Bell’s Theorem*, Vienna.
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- 2014 *Arthur, War, and the Sea*, Boulogne-sur-Mer.
- 2014 *Nonlinear Physics at the Nanoscale: A Cross-Fertilization on Stochastic Methods*, Dresden.
- 2014 *Sydney Meeting on Quantum Foundations*, Sydney.
- 2013 *Emergent Quantum Mechanics 2*, Vienna.
- 2013 *Quantum Information Processing and Communication*, Florence, Italy.
- 2013 *Coherence and Quantum Optics X*, Rochester, New York.
- 2013 *Quantum Theory Without Observers III*, Bielefeld, Germany.
- 2013 *New Directions in the Quantum Control Landscape*, Kavli Institute for Theoretical Physics, UCSB, California.
- 2013 **Plenary** talk at *15th Southwest Quantum Information Technology Workshop*, Santa Barbara, California.
- 2012 *6th Asia-Pacific Conference & Workshop on Quantum Information Science*, Putrajaya, Malaysia
- 2012 *2nd Australia–China Quantum Control Workshop*, CAS, Beijing.
- 2012 *6th Workshop on Principles and Applications of Control in Quantum Systems*, Tokyo.
- 2012 *Quantum Theory without Observers II*, Sexton Center for Astrophysics, Italy.
- 2012 *First Control of Quantum Systems MURI Retreat*, Berkeley, California.
- 2012 *First NASA Quantum Future Technologies Conference*, NASA Ames, California.
- 2011 Royal Society workshop on *Principles and applications of quantum control engineering*, Kavli Centre, Chicheley Hall, UK.
- 2011 **Lecture series** at CEA-EDF-INRIA School, *Quantum Information, Measurement, and Control*, (4 lectures), INRIA, Paris.
- 2011 **Plenary** talk at *5th International Scientific Conference on Physics and Control*, León, Spain
- 2011 **Plenary** talk at *Frontiers of Quantum and Mesoscopic Thermodynamics*, Prague.
- 2011 *5th Asia-Pacific Workshop on Quantum Information Science*, Singapore.
- 2011 *2nd Conference on Extreme Quantum Information Theory*, MIT, Boston.
- 2010 **Opening Tutorial** at *1st Australia–China Quantum Control Workshop*, ANU, Canberra.
- 2010 *5th Workshop on Principles and Applications of Control in Quantum Systems*. Sandbjerg Estate, University of Aarhus, Denmark.
- 2010 *Workshop on Entanglement and Quantum Control*, Qufu, Shandong, China.
- 2010 *International Program on Quantum Information*, Institute of Physics, Bhubaneswar, India.
- 2010 **Plenary** talk at *40th Physics of Quantum Electronics Conference*, Snowbird, Utah
- 2009 *PIAF '09 New Perspectives on the Quantum State*, Perimeter Institute, Waterloo, Canada.
- 2009 *Workshop on Cooling & Calculating, Quantum Walks & Feedback*, Bonn.
- 2009 *Concepts and Methods in Quantum Control: Theory and Experiment*, Kavli Institute for Theoretical Physics, UCSB, California.
- 2008 *4th Workshop on Principles and Applications of Control in Quantum Systems*, Eugene, Oregon.
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- 2008 9th International Conference on *Quantum Communication, Measurement, and Computing*, Calgary, Canada.
 - 2008 **Opening Tutorial** at OSA workshop on *Entanglement and Quantum Decoherence*, Nara, Japan.
 - 2007 **Opening Keynote** at *Noise, Information and Complexity at the Quantum Scale*, Erice, Italy.
 - 2007 3rd Workshop on *Principles and Applications of Control in Quantum Systems*, Sydney,
 - 2007 Workshop on *Weak Values and Weak Measurements*, Arizona State.
 - 2007 **Plenary** talk at 37th *Physics of Quantum Electronics Conference*, Snowbird, Utah.
 - 2006 *Frontiers of Quantum Decoherence* International Workshop, Fields Institute, Toronto.
 - 2006 2nd Workshop on *Principles and Applications of Control in Quantum Systems*, Harvard.
 - 2005 **Lecture Series** at *Quantum Control Summer School* (3 lectures), Caltech.
 - 2005 Conference on *Being Bayesian in a Quantum World*, Konstanz, Germany.
 - 2005 *APS Division of Atomic, Molecular, and Optical Physics*, Lincoln, Nebraska.
 - 2004 First Asia-Pacific Conference on *Quantum Information*, Tainan, Taiwan.
 - 2004 *Frontiers in Optics* (OSA Annual Meeting), Rochester.
 - 2004 1st Workshop on *Principles and Applications of Control in Quantum Systems*, Caltech.
 - 2004 Workshop on *Reference Frames and Superselection Rules in Quantum Information Theory*, Perimeter Institute, Waterloo, Canada.
 - 2004 International Symposium on *Fluctuations and Noise*, Canary Islands.
 - 2004 Gordon Research Conference on *Quantum Information Science*, Ventura, California.
 - 2003 Workshop on *Quantum Measurements and Quantum Stochastics*, University of Aarhus.
 - 2003 16th *International Conference on Laser Spectroscopy*, Palm Cove, Queensland.
 - 2003 8th International Conference on *Squeezed States and Uncertainty Relations*, Puebla, Mexico.
 - 2003 First International Symposium on *Fluctuations and Noise*, Santa Fe.
 - 2003 US-Australia Workshop on *Quantum Information Science*, Sydney.
 - 2002 *Quantum Engineering, Science and Technology* Workshop, Santa Fe.
 - 2001 One-day Meeting on *Environments, Control and Quantum Circuits*, University of Liverpool.
 - 2001 Workshop on *Quantum Information* at Coolangatta, University of Queensland.
 - 1999 One-day International Workshop on *Bose-Einstein Condensates and Atom Lasers*, Australian National University.
 - 1999 Workshop on *Stochastics and Quantum Physics*, University of Aarhus, Denmark.
 - 1998 Garda Workshop on *Mysteries, Puzzles and Paradoxes in Quantum Mechanics*, Garda, Italy.
 - 1997 5th International Conference on *Squeezed States and Uncertainty Relations*, Balaton, Hungary.
 - 1996 3rd International Workshop on *Quantum Communication and Measurement*, Fuji, Japan.
 - 1996 Les Houches Workshop on *Collective Effects in Ultracold Atomic Gases*, Les Houches, France.
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Invited Talks at National Meetings

- 2023 **Keynote** talk at *CQC²T annual workshop*, 29 May–1 June, Hunter Valley.
- 2023 *Jon Dowling Memorial Conference*, 9–11 January, Quantum Terminal, Sydney.
- 2022 **Boas Medal Lecture**, *Australian Institute of Physics Congress*, 11–16 December, Adelaide.
- 2021 *Australian Institute of Physics Meeting*, 6–9 December, Brisbane.
- 2021 *Engineered quantum agents* conference, 9–12 February, Noosa.
- 2015 **Keynote** talk at *Australian Control Conference*, Gold Coast.
- 2014 *21st Australian Institute of Physics Congress*, Canberra.
- 2010 *19th Australian Institute of Physics Congress*, Melbourne.
- 2009 *Quantum Frontiers Symposium*, University of Queensland.
- 2009 *Sydney Quantum Information Theory Workshop*, Sydney.
- 2008 New Fellows Seminar, Australian Academy of Science.
- 2008 *Sydney Quantum Information Theory Workshop*, Sydney.
- 2006 *Australian Optical Society Conference*, Melbourne.
- 2004 Symposium: *A Celebration of Australian Science*, Australian Academy of Science.
- 2003 **Keynote** talk at *Australasian Conference on Optics, Lasers, and Spectroscopy*, Melbourne.
- 2003 Symposium on *Frontiers of Science*, Australian Academy of Science.
- 2002 *Quantum Information and Computing Summer School*, Queensland.
- 2001 **Keynote talk** at *Australasian Conference on Optics, Lasers, and Spectroscopy*, Brisbane.
- 1996 *12th Australian Institute of Physics Congress*, Hobart.

Other Notable Talks at International or National Meetings

- 2024 25th Congress of the International Arthurian Society, Aix-en-Provence, France.
- 2019 Plenary-length talk at *Asian Quantum Information Science* conference, Seoul.
- 2018 *Quantum Gates, Jumps, and Machines*, Brisbane (all talks by invitation, but I'm not counting this as an invited talk since I was the Conference Chair.)
- 2018 Foundations2018, Utrecht, Netherlands.
- 2017 23rd Congress of the International Arthurian Society, Würzburg, Germany.
- 2016 **Keynote** talk at *21st Australian Institute of Physics Congress*, Brisbane.
- 2016 13th International Conference on *Quantum Communication, Measurement, and Computing*, Singapore (contributed but very competitive)
- 2014 3rd *Australia–China Quantum Control Workshop*, Brisbane (all talks by invitation, but I'm not counting this as an invited talk since I was the Conference Chair.)
- 2015 Invited-length (upgraded) talk at *Causality in a Quantum World*, Sunshine Coast, Australia

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- 2012 “Hot Topic” talk (contributed but very competitive), 11th International Conference on *Quantum Communication, Measurement, and Computing*, Vienna
- 2002 6th International Conference on *Quantum Communication, Measurement, and Computing*, Cambridge, Massachusetts. (contributed, but quite competitive)

Notable Invited Public Talks

- 2024 “Are we living in the Matrix? What quantum experiments reveal about the world and our powers in it, and what the future may hold.”
Société Française de Physique «Questions de Physique» colloque, CNRS, Grenoble, 22 April.
- 2022 “Are we living in the Matrix? What quantum experiments reveal, and what the future may hold.”
Australian Institute of Physics (Victorian branch) Walter Boas Lecture, October 3.
- 2017 “Are We Living in the Matrix?”
Interdisciplinary Frontiers, Singapore Science Centre, Singapore.
- 2016 “The Big Bell Test”
Griffith University Impact Event, Southbank, Brisbane.
- 2016 “Are We Living in the Matrix?”
New Scientist Instant Expert symposium *Quantum World*, UNSW, Sydney.
- 2011 “Are We Living in the Matrix?”
BrisScience, Customs House, Brisbane.
- 2009 “The God Particle Delusion”
Griffith University Maths and Physics associaTION, Nathan, Brisbane.
- 2008 “Quantum Computing and Quantum Measurement: a two-way street”
Public Forum, Australian Academy of Science, Townsville.
- 2005 “Einstein and the Prehistory of Quantum Computing”
Australian Institute of Physics Colloquium, UQ, Brisbane.
- 2002 “Quantum Computing: What’s the Buzz?”
IEEE Queensland Chapter, Brisbane.

Executive Service on Professional Committees

- 2022-3 Co-organiser, *Wigner's Friends: Experiment Workshop*, San Francisco, Mar. 21 – 23, 2023.
- 2022 Co-organiser, *Wigner's Friends: Theory Workshop*, San Francisco, Nov. 30 – Dec. 2, 2022.
- 2018-19 Program Committee Chair, *Asian conference on Quantum Information Science*, Korea, 2019.
- 2017-18 Chair, *Quantum Gates, Jumps & Machines (in honour of G. J. Milburn)*, Brisbane 2018.
- 2013-14 Chair, *Australia–China workshop on Quantum Control*, Brisbane 2014.
- 2009-10 Principal Organizer, *Quantum Measurement and Control* workshop, Sydney 2010.
- 2006–07 Chair for the 3rd International Workshop on *Principles and Applications for Control of Quantum Systems (PRACQSYS)*, Sydney 2007.
- 2005–08 Inaugural Chair for *Quantum Information, Concepts, and Coherence*, a Topical Group of the Australian Institute of Physics
- 2004–07 Treasurer and Program Committee member, 2006 Australian Institute of Physics Congress
- 2003–04 Treasurer of Queensland Branch of the Australian Institute of Physics.
- 2000–01 Secretary for the *Australasian Conference on Optics, Lasers, and Spectroscopy 2001*

Other Service on Professional Committees

- 2024-25 Action Committee for International Year of Quantum, AIP Queensland Branch
- 2024- Walter Boas Medal Award Committee, *Australian Institute of Physics*
- 2023-5 Pawsey Medal Award Committee, *Australian Academy of Science*
- 2018-9 International Advisory Committee, 1st Quantum Science, Engineering and Technology (qSET) Conference, Canberra, April 2019.
- 2017-8 Program Committee for *19th U.K. and European Meeting on the Foundations of Physics*, Utrecht, July 2018
- 2016-7 Coörganiser for Focus Session “Challenging conventional quantum limits in measurements and metrology” at *APS March Meeting*, New Orleans, March 2017
- 2016 Program Committee for *Australia–China workshop on Quantum Control*, Hefei 2016
- 2014 Fellowship Selection Committee for the *Group on Quantum Information of the APS*.
- 2013-14 Program Committee for *Quantum Communication, Measurement and Computing*, Hefei, China, November, 2014.
- 2013-14 Program Committee for *Quantum Information and Measurement*, Berlin, March, 2014.
- 2013 Pawsey Medal Award Committee, *Australian Academy of Science*
- 2012-13 Program Committee for Conference on *Quantum Information Processing and Computing (QIPC)*, Florence 2013.
- 2012-14 College of Experts on *Physics, Chemistry and Earth Sciences*, Australian Research Council.
- 2012 Program Committee for 5th International Workshop on *Principles and Applications for Control of Quantum Systems (PrACQSys)*, Tokyo 2012.

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- 2011-13 Sectional Committee 11, on *Information, Communication, and Quantum Information Sciences*, Australian Academy of Science.
 - 2009-11 Sectional Committee 2, on *Physics and Astronomy*, Australian Academy of Science.
 - 2009 Program Committee for *Australian Conference on Optics, Lasers, and Spectroscopy*, Adelaide 2009
 - 2007–08 Program Committee for *Quantum Communication, Measurement and Computing*, Calgary, 2008.
 - 2003 Session Organizer for the inaugural *Frontiers of Science* symposium of the Australian Academy of Science.
 - 2001–04 Associate editor (Queensland) for *The Physicist*.
 - 1998–04 Committee of Queensland Branch of the Australian Institute of Physics.

Advisory Service on Professional Committees

- 2024-25 International Advisory Committee of the 2025 IEEE International Conference on Quantum Control, Computing and Learning
- 2023-24 International Advisory Committee, *Siam Quantum Science and Technology conference*, Krabi, Thailand, December 2024.
- 2020– Advisory Board for the Center for Quantum Frontiers of Research & Technology (QFoRT), National Cheng Kung University, Tainan, Taiwan.
- 2019 Advisory Board for the 11th *Italian Quantum Information Science conference*, Milan, September 2019.
- 2015 International Advisory Committee for the *Asia-Pacific Conference and Workshop on Quantum Information Science*, Auckland, December, 2015
- 2013 International Committee for *Asia-Pacific Conference & Workshop on Quantum Information Science*, Korea, December 2013.
- 2012–15 Advisory Board, *Science China – Information Sciences* (Springer & Science China Press)
- 2012-13 Organizing Committee for *Quantum Information and Measurement*, Rochester, June, 2013.
- 2011-12 Advisory Board, 1st NASA *Quantum Future Technologies Conference*
- 2008 International Advisory Board for *XII International Conference on Quantum Optics and Quantum Information*, Vilnius 2008
- 2003–04 Committee of *Noise and Fluctuations in Photonics and Quantum Optics*, part of the *SPIE 2004 International Symposium on Fluctuations and Noise*
- 2002–03 Committee of *Noise and Fluctuations in Photonics and Quantum Optics*, part of the *SPIE 2003 International Symposium on Fluctuations and Noise*

External Higher Degree Examinations

2023-4	Ph.D, University of Auckland
2022	Ph.D., University of Bristol
2021	Ph.D., Ecole Normale Supérieure de Lyon
2019	Ph.D., Monash University
2018	Ph.D., University of Calgary
2017	Ph.D., Macquarie University
2016	Dr. habil., Technical University of Berlin
2013	Ph.D., Australian National University
2012	Ph.D., University of Waterloo
2010	Ph.D., University of Aarhus
2009	Ph.D., University of Auckland
2002	Ph.D., University of Auckland
2002	M.Sc., University of Queensland
2000	Ph.D., University of Queensland
2000	D. Phil., University of Auckland
1999	Ph.D., Australian National University

Assessing for Selected International Granting Agencies

Austrian Science Fund (FWF)

Fields Institute [Canada]

The Foundational Questions Institute (FQXi)

Hong Kong Research Council (HKRC)

The Leverhume Trust [UK]

The Marsden Fund [NZ]

National Natural Science Foundation of China (NSFC)

National Research Foundation of South Africa (NRF)

National Science Foundation [USA] (NSF)

Natural Sciences and Engineering Research Council of Canada (NSERC)

Netherlands Organisation for Scientific Research (NWO)

The Royal Society [UK]

Singapore National Research Foundation (NRF)

The Templeton Foundation

Citations etc.

Data from *Scopus*, (www.scopus.com/authid/detail.uri?authorId=7102618592), not Google scholar.

1 Book with 1000+ citations

1109 cites H. M. Wiseman and G. J. Milburn,
Quantum Measurement and Control,
 (Cambridge University Press, Cambridge, 2010): 476 pages

1 paper with 1000+ citations

1198 cites H. M. Wiseman, S. J. Jones, and A. C. Doherty,
 “Steering, Entanglement, Nonlocality, and the Einstein-Podolsky-Rosen Paradox”,
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615 cites C. Branciard, E. G. Cavalcanti, S. P. Walborn, V. Scarani, and H. M. Wiseman,
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 “Quantum theory of optical feedback via homodyne detection”,
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508 cites B. L. Higgins, D. W. Berry, S. D. Bartlett, H. M. Wiseman, and G. J. Pryde,
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488 cites E. G. Cavalcanti, S. J. Jones, H. M. Wiseman, and M. D. Reid,
 “Experimental criteria for steering and the Einstein-Podolsky-Rosen paradox”
 Phys. Rev. A. **80**, 032112 (16 pages) (2009).

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 Phys. Rev. A **47**, 642-662 (1993).

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“Experimental EPR-Steering of Bell-local States”
Nature Physics **6**, 845-849 (2010).
- 309 cites H. M. Wiseman and G. J. Milburn,
“Interpretation of quantum jump and diffusion processes, illustrated on the Bloch sphere”,
Phys. Rev. A **47**, 1652-1666 (1993).
- 306 cites H. M. Wiseman and J. A. Vaccaro,
“Entanglement of indistinguishable particles shared between two parties.”
Phys. Rev. Lett. **91**, 097902 (4 pages) (2003).

h-index¹ = 72, and > 18,000 Citations in total

That is, I have 72 papers each with at least 72 citations, published since 1993.

62 Refereed Papers² in High-Impact Journals³

of which: 1 in *Science*, 2 in *Nature*, 4 in *Nature Physics*, 1 in *Nature Photonics*, 3 in *Nature Communications*, 3 in *Science Advances*, 6 in *Physical Review X*, 33 in *Physical Review Letters*, 1 in *PRX Quantum*, 2 in *AVS Quantum Science*, 2 in *Optica*, 1 in *NPJ Quantum Information*, and 3 (brief monographs) in *Physics Reports*.

of which: 2 as sole author, 10 as first author, 9 as official corresponding author.

4 Invited Commentaries in *Nature*

all as sole author (2011, 2012, 2014, 2015)

¹ J. Hirsch, *Proc. Nat. Acad. Sci.* **46**, 16569 (2005). Again, from *Scopus*. (My Google-Scholar h-index is 83.)

² Including *Scientific Correspondence* (*Nature*, 1995) but **not** *Comments* or *Replies* or *News & Views*.

³ Here taken to mean with Impact Factor > 7 around the year of publication.

Coverage in Books (selected)

2019 Lee Smolin, *Einstein's Unfinished Revolution*
(Penguin, London, 2019)

Discusses (pp. 219-220) many-interacting worlds i.e.

Michael J. W. Hall, Dirk-André Deckert, and Howard M. Wiseman,
“Quantum phenomena modelled by interactions between many classical worlds”
[Phys. Rev. X 4 041013](#) [17 pages] (2014).

2018 Anil Ananthaswamy, *Through Two Doors at Once*
(Dutton, New York, 2018)

One paragraph explanation (p. 170) of

H. M. Wiseman,
Grounding Bohmian Mechanics in Weak Values and Bayesianism
New J. Phys. **9**, 165 (12 pages) (2007).

Detailed explanation (pp. 257–261), with quotes from me, of

Michael J. W. Hall, Dirk-André Deckert, and Howard M. Wiseman,
“Quantum phenomena modelled by interactions between many classical worlds”
[Phys. Rev. X 4 041013](#) [17 pages] (2014).

Additionally, pp. 240 and 242 quotes my misgivings about the claim that the problem of probability in the Many Worlds Interpretation has been solved.

2016 Ian Durham, “Boundaries of Scientific Thought”, in *Information and Interaction*,
Edited by Ian Durham and Dean Rickles (Springer, New York, 2016)

Discusses (p. 28) many-interacting worlds i.e.

Michael J. W. Hall, Dirk-André Deckert, and Howard M. Wiseman,
“Quantum phenomena modelled by interactions between many classical worlds”
[Phys. Rev. X 4 041013](#) [17 pages] (2014).

2016 Jaclyn Moriarty,
A Tangle of Gold: book 3 of *The Colours of Madeleine* trilogy. [Young adult fantasy]
(Pan Macmillan, Australia, 2016)

Part 14, chapter 3, relates that a note (authored by a still-living Sir Isaac Newton, it will later be revealed)
“was pinned to another stack of pages: *Here's the latest on the death of wave/particle duality & of Schrödinger's cat (ha!) etc, & on new idea that multiple, jostling, invisible universes (each operating according to Newtonian law (!)) is true explanation for quantum weirdness.* Madeleine flicked through more loose papers, catching names: John Dalton, Henri Becquerel, Max Planck, Marie Curie, Ada Lovelace, Hugh Everett, Howard Wiseman.”

The “new idea” in Newton’s note (in italics) refers to

Michael J. W. Hall, Dirk-André Deckert, and Howard M. Wiseman,
“Quantum phenomena modelled by interactions between many classical worlds”
[Phys. Rev. X 4 041013](#) [17 pages] (2014).

2013 Detlef Dürr, Sheldon Goldstein, and Nino Zanghi,
Quantum Physics Without Quantum Philosophy
(Springer, Heidelberg, 2013)

Chap. 7, entitled “On the Weak Measurement of Velocity in Bohmian Mechanics”, is a presentation of, and elaboration upon,

H. M. Wiseman,
Grounding Bohmian Mechanics in Weak Values and Bayesianism

New J. Phys. **9**, 165 (12 pages) (2007).

2009 A. Barchielli and M. Gregoratti,
Quantum Trajectories and Measurements in Continuous Time – The Diffusive Case
(Springer, Heidelberg, 2009)

Sec. 10.2 is entitled “The Feedback Scheme of Wiseman and Milburn”, and this theory forms the basis for the rest of the chapter (*Feedback*). For the “original derivation” it cites

H. M. Wiseman,
Quantum theory of continuous feedback,
Phys. Rev. A **49**, 2133-2150 (1994).

2007 Guy Halsall, *Barbarian Migrations and the Roman West, 376-568*
(Cambridge University Press, Cambridge, 2007)

one-paragraph discussion (p. 522) of

H. Wiseman,
The derivation of the date of the Badon entry in the Annales Cambriae from Bede and Gildas,
Parergon **17**, 1-10 (2000).

2007 S.M. Barnett and J.A. Vaccaro, *The Quantum Phase Operator: A Review*
(Taylor and Francis, London, 2007),

reproduces and briefly discusses

H. M. Wiseman,
Adaptive phase measurements of optical modes: Going beyond the marginal Q distribution,
Phys. Rev. Lett. **75**, 4587-4590 (1995).

2004 C.W. Gardiner and P. Zoller, *Quantum Noise* (3rd edition)
(Springer, New York, 2004)

Sec. 13.5 (*Quantum Feedback*) begins “This subject has been largely developed by Wiseman and Milburn [J4,J7]. The main issues are very well covered in the paper by Wiseman, Mancini and Wang [J61].” The remainder of the section is based largely on material in this third paper,

H. M. Wiseman, S. Mancini, and J. Wang,
Bayesian feedback versus Markovian feedback in a two-level atom,
Phys. Rev. A **66**, 013807 (9 pages) (2002).

2002 N. Higham, *King Arthur: Myth-Making and History*
(Routledge, London, 2002)

one-paragraph discussion (pp. 209–10) of

H. Wiseman,
The derivation of the date of the Badon entry in the Annales Cambriae from Bede and Gildas,
Parergon **17**, 1-10 (2000).

Coverage in non-specialist Reviews (selected)

Reviews covering the following:

Howard M. Wiseman, Eric G. Cavalcanti, and Eleanor G. Rieffel,
“A ‘thoughtful’ Local Friendliness no-go theorem: a prospective experiment with new assumptions to suit”

Quantum 7, 1112 (2023). <https://doi.org/10.22331/q-2023-09-14-1112>

2024 Anil Ananthaswamy,

“The Quantum Observer”

Scientific American, July/August 2024, pp. 55-61.

<https://www.scientificamerican.com/article/can-ai-save-schroedingers-cat/>

2024 Amanda Gefter,

“‘Metaphysical Experiments’ Probe Our Hidden Assumptions About Reality”

Quanta Magazine, July 30.

<https://www.quantamagazine.org/metaphysical-experiments-test-hidden-assumptions-about-reality-20240730/>

Reviews covering the following:

Travis J. Baker, Seyed N. Saadatmand, Dominic W. Berry, and Howard M. Wiseman,
“The Heisenberg limit for laser coherence”

Nature Physics (online in 2020). DOI: 10.1038/s41567-020-01049-3

2021 Sophia Chen, “Physicists Are Reinventing the Laser”

Gizmodo, 30 January, 2021

<https://gizmodo.com/physicists-are-reinventing-the-laser-1846085004>

2020 Brad Bergen, “Quantum Researchers Broke 60-Year-Old Laser Limit, Says Study”

Interesting Engineering, 29 October, 2020

<https://interestingengineering.com/quantum-researchers-broke-60-year-old-laser-limit-says-study>

2020 Lauren Fuge, “Pushing the laser limit: Researchers offer a taste of what’s possible”

Cosmos Magazine, 27 October, 2020

<https://cosmosmagazine.com/science/physics/pushing-the-laser-limit/>

2020 David Bradley, “60-year laser theory overturned”

Science Base, 26 October, 2020

<https://www.sciencebase.com/science-blog/60-year-laser-theory-overturned.html>

Reviews covering the following:

Kok-Wei Bong, Aníbal Utreras-Alarcón, Farzad Ghafari, Yeong-Cherng Liang, Nora Tischler, Eric G. Cavalcanti, Geoff J. Pryde and Howard M. Wiseman

“A strong no-go theorem on the Wigner’s friend paradox”

Nature Physics (2020). DOI: 10.1038/s41567-020-0990-x

2023 Anil Ananthaswamy,

“Quantum Theory’s ‘Measurement Problem’ May Be a Poison Pill for Objective Reality”

Scientific American, May 22, 2023

<https://www.scientificamerican.com/article/quantum-theorys-measurement-problem-may-be-a-poison-pill-for-objective-reality/>

2022 Elizabeth Fernandez, “Does consciousness change the rules of quantum mechanics?”
Hard Science, November 4, 2022

<https://bigthink.com/hard-science/quantum-entanglement-consciousness>

2020 Zeeya Merali and Ian Durham, #5 biggest story of the year in physics.
The FQXi Podcast (31 December, 2020) “Year in Physics Review”

<http://www.fqxi.org/community/podcast/2020.12.31>

2020 Anil Ananthaswamy, “A New Theorem Maps Out the Limits of Quantum Physics”

Quanta magazine, December 3, 2020

<https://www.quantamagazine.org/a-new-theorem-maps-out-the-limits-of-quantum-physics-20201203/>

2020 National Cheng Kung University Release, “A quantum leap in our understanding of the quantum world, after half a century”, September 12, reproduced in multiple places in Taiwan.

<http://news-en.secr.ncku.edu.tw/p/406-1038-211828.r614.php?Lang=en>

2020 Elizabeth Fernandez, “Quantum Physics May Upend Our Macroscopic Reality In The Universe”
Forbes Magazine, September 1, 2020

<https://www.forbes.com/sites/fernandezelizabeth/2020/09/01/quantum-physics-may-upend-our-macroscopic-reality-in-the-universe/#576f26787328>

2020 Emma Hollen, “Physique quantique: cette expérience remet-elle en question notre réalité?”

Futura Sciences, August 30, 2020

<https://www.futura-sciences.com/sciences/actualites/physique-physique-quantique-cette-experience-remet-elle-question-notre-realite-78402/>

2020 Ulf Von Rauchhaupt, “Realität in der Quantenphysik: Sind Fakten nur eine Frage der Perspektive?”

Frankfurter Allgemeine Zeitung, August 24, 2020

<https://www.faz.net/aktuell/wissen/physik-mehr/realitaet-in-der-quantenphysik-sind-fakten-nur-eine-frage-der-perspektive-16916166.html>

2020 Eric Cavalcanti (one of the authors),

“A new quantum paradox throws the foundations of observed reality into question”

The Conversation, August 24, 2020

<https://theconversation.com/a-new-quantum-paradox-throws-the-foundations-of-observed-reality-into-question-144426>

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“Baffling New Quantum Paradox Reveals Beliefs About The Physical World Are Wrong!”

MessageToEagle, August 22, 2020

<https://www.message-to-eagle.com/baffling-new-quantum-paradox-reveals-beliefs-about-the-physical-world-are-wrong/>

2020 Chris Lee, “Quantum reality is either weirdly different or it collapses”

Ars Technica, August 20, 2020

<https://arstechnica.com/science/2020/08/quantum-reality-is-either-weirdly-different-or-it-collapses/>

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- Interesting Engineering, August 18, 2020
<https://interestingengineering.com/quantum-paradox-suggests-the-fabric-of-our-reality-is-inconstant>
- 2020 Griffith Media release, “New quantum paradox reveals contradiction between widely held beliefs”
 reproduced in multiple places including Phys.Org, August 18, 2020
<https://phys.org/news/2020-08-quantum-paradox-reveals-contradiction-widely.html>
- 2020 Zeeya Merali,
 “This Twist on Schrödinger’s Cat Paradox Has Major Implications for Quantum Theory”
 Scientific American, August 17, 2020
<https://www.scientificamerican.com/article/this-twist-on-schroedingers-cat-paradox-has-major-implications-for-quantum-theory/>
- 2020 George Musser, “Quantum paradox points to shaky foundations of reality”
 Science News, August 17, 2020
<https://www.sciencemag.org/news/2020/08/quantum-paradox-points-shaky-foundations-reality>
- 2020 Časlav Brukner, “Facts are Relative”
 Nature Physics, August 17, 2020
<https://www.nature.com/articles/s41567-020-0984-8>
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- 2020 Ingrid Fadelli, “A method to perform canonical phase measurements using quantum feedback”,
 Phys.org <https://phys.org/news/2020-08-method-canonical-phase-quantum-feedback.html> (Aug 19, 2020).
 Feature article on:
 Leigh S. Martin, William P. Livingston, Shay Hacoen-Gourgy, Howard M. Wiseman & Irfan Siddiqi, “Implementation of a canonical phase measurement with quantum feedback”
 Nature Physics (2020). DOI: 10.1038/s41567-020-0939-0
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- 2020 Anna Demming, “Heisenberg limit gets a meaningful update”,
 Phys.org <https://phys.org/news/2020-02-heisenberg-limit-meaningful.html> (February 3, 2020).
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 Wojciech Górecki, Rafał Demkowicz-Dobrzański, Howard M. Wiseman, and Dominic W. Berry,
 “ π -Corrected Heisenberg Limit”
 Phys. Rev. Lett. **124**, 030501 (2020).
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- 2019 Daniel Cossins, “How to think about Quantum Uncertainty”
 New Scientist **3260** (14 December 2019), pp. 35-36.
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<https://www.newscientist.com/article/mg24432600-700-in-the-quantum-world-uncertainty-reigns-or-is-it-all-in-the-mind/>
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- 2018 Chris Lee, “Entanglement allows one party to control measurement results”
 Ars Technica, 16/9/2018
<https://arstechnica.com/science/2018/09/quantum-entanglement-used-to-steer-measurement-results/>
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 Nora Tischler *et al.*
 Conclusive experimental demonstration of one-way Einstein-Podolsky-Rosen steering
 Phys. Rev. Lett. **121**, 100401 (2018).
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D. H. Mahler, L. Rozema, K. Fisher, L. Vermeyden, K. J. Resch, H. M. Wiseman, A. Steinberg,
 “Experimental nonlocal and surreal Bohmian trajectories”
[Science Adv.](https://doi.org/10.1126/science.1501466) **2**, e1501466 (2016). DOI: 10.1126/science.1501466

2016 Dan Falk, “Scientists Are Punnier Than You Think”

Slate Magazine, May 19, 2016

<https://slate.com/technology/2016/05/the-best-jokes-scientists-sneak-into-the-research-papers-to-make-them-slightly-less-boring.html>

Covers a parenthetical comment that appeared only in the originally published version of the paper.

2016 Dan Falk, “New Support for Alternative Quantum View”

Quanta Magazine, May 16, 2016

<https://www.quantamagazine.org/20160517-pilot-wave-theory-gains-experimental-support/>

reprinted in

Thomas Lin (ed.), “Alice and Bob Meet the Wall of Fire” (MIT Press, Boston, 2018), pp. 61-66.

2016 Dirk Eidemüller, “Quantenteilchen auf Bohmschen Bahnen”

Spektrum [German edition of Scientific American] News – 02.03.2016

<http://www.spektrum.de/news/quantenteilchen-auf-bohmschen-bahnen/1401600>

2016 Hamish Johnston, “Surreal behaviour spotted in photon experiment”

Physics World – News, Feb 26, 2016

<http://physicsworld.com/cws/article/news/2016/feb/26/surreal-behaviour-spotted-in-photon-experiment>

2016 Cathal O’Connor, “A different picture of quantum surrealism”

Cosmos – News, 22 February, 2016

<https://cosmosmagazine.com/physical-sciences/different-picture-quantum-surrealism>

2016 Anil Ananthaswamy, “Quantum weirdness may hide an orderly reality after all”

New Scientist – Daily News, 19 February, 2016

<https://www.newscientist.com/article/2078251-quantum-weirdness-may-hide-an-orderly-reality-after-all/>

2015 Adrian Cho, “More evidence to support quantum theory’s ‘spooky action at a distance’”,

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<http://news.sciencemag.org/physics/2015/08/more-evidence-support-quantum-theory-s-spooky-action-distance>

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Maria Fuwa, Shuntaro Takeda, Marcin Zwierz, **Howard M. Wiseman**, and **Akira Furusawa**

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Nature Communications **6**, 6665 (6 pages) (2015). DOI: 10.1038/ncomms7665

2015 Karen Hardison, “Einstein’s contradiction of ‘spooky action at a distance’ refuted”

Digital Journal, March 31, 2015

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- 2015 Janet Fang, “«Spooky Action at a Distance» Confirmed by New Quantum Experiment”
IFLScience, March 31, 2015
<http://www.iflscience.com/physics/einsteins-spooky-action-distance-confirmed-new-quantum-experiment>
- 2015 Michelle Starr, “Researchers demonstrate quantum entanglement, prove Einstein wrong”
CNET, March 29, 2015
<http://www.cnet.com/news/researchers-demonstrate-quantum-entanglement-prove-einstein-wrong/>
- 2015 Christian Nordqvist, “Einstein was wrong about ‘spooky action at a distance’, scientists say”
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<http://marketbusinessnews.com/einstein-was-wrong-about-spooky-action-at-a-distance-scientists-say/54699>
- 2015 Troy Deag, “Griffith Uni Researchers Prove Einstein was Wrong”
27 March 2015
<http://www.training.com.au/ed/griffith-uni-researchers-prove-einstein-was-wrong/>
- 2015 Fiona MacDonald, “Single-particle ‘spooky action at a distance’ finally demonstrated”
Science Alert, 27 March 2015
<http://www.sciencealert.com/spooky-action-at-a-distance-in-a-single-particle-has-been-demonstrated-for-the-first-time>
- 2015 Dirk Eidemüller, “Und noch ein Schlupfloch erfolgreich geschlossen”
Spektrum [German edition of Scientific American] 26.03.2015
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- 2015 Jesse Emspak, “Proving Einstein Wrong with ‘Spooky’ Quantum Experiment”
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<http://www.livescience.com/50262-spooky-action-is-real.html>
- 2015 John Ross, “Queensland researchers prove Albert Einstein wrong”
The Australian (online), 25 March 2015
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- Michael J. W. Hall, Dirk-André Deckert, and Howard M. Wiseman,
“Quantum phenomena modelled by interactions between many classical worlds”
[Phys. Rev. X](#) **4** 041013 [17 pages] (2014).
- 2017 Eleana Sanz,
“12 avances que lo cambiarían todo. 1 ¿Qué pasaría si ... detectáramos universos paralelos?”
MUY Interesante [Spanish popular science magazine] **432** (May 2017).
- 2017 Shannon Hall, “Where are we in the multiverse?” [cover story]
New Scientist magazine **3109** (21 January 2017), pp. 28-31.
[discusses our Many Interacting Worlds approach on p. 31.]
- 2017 Sophia Chen, “Physicists cannot agree about quantum world”
New Scientist magazine **3107** (7 January 2017),
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<https://www.newscientist.com/article/mg23331074-600-physicists-cant-agree-on-what-the-quantum-world-looks-like/>

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2016 Dan Falk, “Many Worlds” [cover story]

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Nature (News Feature) **521**, 278–280 (21 May 2015) DOI:10.1038/521278a

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Focus [Italian Magazine] #268, Febbraio 2015

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Guest Post on Sean Carroll’s blog (16 December, 2014)

<http://www.preposterousuniverse.com/blog/2014/12/16/guest-post-chip-sebens-on-the-many-interacting-worlds-approach-to-quantum-mechanics/>

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<http://www.fqxi.org/community/podcast/2014.11.29>

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New Scientist magazine **2994** (8 November 2014), pp.6-7

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Photonics Spectra (December, 2012), pp. 37-8.

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Quantum-enhanced optical phase tracking
Science **337**, 1514–1517 (2012).

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ScienceNews (September 14, 2012)

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A. P. Lund and H. M. Wiseman,
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New J. Phys. **12**, 093011 (2010).

2012 Lisa Zyga, “Proposed experiment would prove that quantum jumps are not objective events”,
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<http://www.physorg.com/news187520515.html>
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Nature **450**, 393-6 (2007).
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<http://www.nature.com/milestones/milephotons/library/fundamentals/index.html>
- 2008 “Quantum physics rules”
Australian Research Council inaugural publication
Outcomes: Results of research in the real world '08, p. 60
- 2008 “World’s most precise ruler created”
Australasian Science April 2008 issue, p. 13 (Article # 35109579).
- 2007 S. Trad, “No size too tiny to gauge”,
The Australian, 21 November 2007, p. 26.
- 2007 Jeremy L. O’Brien, “Precision Without Entanglement”,
Science **318**, 1393-4 (2007)
- 2007 Jonathan P. Dowling, “Kittens catch phase”,
Nature **450**, 362-3 (2007).
- 2007 Phillip Ball, “The most accurate measurement ever made”,
Nature News 14 November 2007 (500 word)
<http://www.nature.com/news/2007/071114/full/news.2007.242.html>
-

- 2007 David Bradley, “Two slits are better than one”,
Science Base 28 July 2007
<http://www.sciencebase.com/science-blog/two-slits-are-better-than-one.html>
focuses on my work, in particular
R. Mir, J.S. Lundeen, M.W. Mitchell, A.M. Steinberg, H. M. Wiseman, and J. L. Garretson,
A double-slit ‘which-way’ experiment on the complementarity—uncertainty debate,
New J. Phys. **9**, 287 (2007).
-

- 2006 J. Roebke, “Quantum Pulp: Some physics is just crime fiction with math.”
SEED Magazine (New York) **2**, 5 (June/July 2006), p. 31.
prominently features
K. Jacobs and H. M. Wiseman,
An entangled web of crime: Bell’s theorem as a short story
Am. J. Phys **73**, 932-937 (2005).
-

- 2004 E. S. Reich, “Which way is up?” (2nd Cover Story) New Scientist **184**, No. 2467 (2 October 2004), pp. 32–35.
-

prominently features and gives as sole “further reading” resource

H. M. Wiseman, S. M. Bartlett, and J. A. Vaccaro,
Ferretting out the fluffy bunnies: Entanglement constrained by generalized super-selection rules.
 Laser Spectroscopy. Proceedings of the XVI International Conference, Eds P. Hannaford, A.
 Sidorov, H. Bachor, and K. Baldwin (World Scientific, New Jersey, 2004), pp. 307-31.

2003 M. Brooks, “Curiouser and curiouser” (Cover Story), *New Scientist* **178**, No. 2394 (10 May 2003), pp. 28–31.

two-paragraph review (p. 31) of

H. M. Wiseman,
Directly Observing Momentum Transfer in Twin-Slit ‘Which-Way’ Experiments,
Phys. Lett. A **311**, 285-291 (2003).

2002 B. D. Guenther (guest editor of special issue) “Optics in 2002”, *Optics and Photonics News* **13**, No. 12 (December, 2002), pp. 13–61.

one-page review (p. 53) of

W. P. Smith, J. E. Reiner, L. A. Orozco, S. Kuhr, and H. M. Wiseman,
Capture and Release of a Conditional State of a Cavity QED System by Quantum Feedback,
Phys. Rev. Lett. **89**, 133601 (2002).

Teaching

Formal University Teaching

Title / Topic	University
FOURTH YEAR CLASSES	
Advanced Quantum Mechanics	Griffith
Advanced Analytical Mechanics	Griffith
General Relativity	Griffith
Honours Statistical Mechanics	Griffith
Topics and Research Methods in Physics	Griffith
Stochastic Methods for the Physical Sciences	Griffith and Queensland
Introductory Quantum Electrodynamics	Griffith
Quantum Optics B (open quantum systems)	Queensland
Advanced Quantum Mechanics	Queensland
Advanced Statistical Mechanics	Queensland
Advanced Quantum Mechanics	Auckland
THIRD YEAR CLASSES	
Advanced Quantum Theory	Griffith
Statistical Mechanics	Queensland
SECOND YEAR CLASSES	
Life, the Universe, and Everything	Griffith
Optics	Griffith
FIRST YEAR CLASSES	
Basic Concepts of Physics	Auckland

Undergraduate Supervision

2022	Co-Supervisor for Jake Nielsen, 3rd-year Capstone Project, GU
2014	Mentor for Aiden Zelandonii, 2nd-year Advanced Studies Task and Project, GU
2010	Mentor for Mathew Curtis, 1st-year Advanced Studies Task, GU
2006	Supervisor for Anushya Chandran, Final Vacation Research Project, B.Tech. Indian Institute of Technology, Madras (undertaken at GU)
2005	Supervisor for Graham White, 3rd-year Advanced Studies Project, GU
2004	Mentor for Graham White, 2nd-year Advanced Studies Task, GU
2003	Industry Partner for Joshua Combes, Industrial Affiliates Program, GU
2002	Mentor for Joshua Garretson, 3rd-year Advanced Studies Project, GU
2002	Mentor for Joshua Combes, 3rd-year Advanced Studies Task and Project, GU
2001	Mentor for Joshua Garretson, 2nd-year Advanced Studies Task, GU
2001	Mentor for Joshua Combes, 2nd-year Advanced Studies Task, GU
1999-00	Supervisor for Zoe Brady, 3rd/4th-year Summer Project, GU
1999	Supervisor for Zoe Brady, 3rd-year Advanced Studies Project, GU
1999	Mentor for Daniel Salmond, 2nd-year Advanced Studies Task, GU
1998-99	Supervisor for Dian Wahyu, 3rd-year Special Research Project, UQ
1994-95	Supervisor for Jacob Dunningham, 3rd/4th-year Summer Project, AU

Honours/Diploma Research Supervision

2017	Supervisor for Kiarn Laverick, GU “Time-varying phase estimation using coherent states”
2016	Supervisor for Travis Baker, GU “New conditions for establishing one-way steerability”
2006	Supervisor for Byron Booth, GU “Does a photon reflecting off a mirror give a momentum kick of $2\hbar k$?”
2006	Associate supervisor for Graham White, GU “Entanglement of Particles and Reference Frames”
2004	Supervisor for Steve Jones, GU “Entanglement under Mixing and Operational Constraints”
2003	Supervisor for visiting Masters diploma student Tomas Askerud, U. Stockholm “Jumplike unravelings for non-Markovian open quantum systems”
2003	Supervisor for Joshua Garretson, GU “Charaterizing Momentum Transfer in Which-Way Experiments”

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- 2002 Co-supervisor for Neil Oxtoby, UQ
“Detection of qubit states by a non-ideal quantum point contact.”
 - 2002 Co-supervisor for Greg Carroll, GU
“Minds and Quantum Mechanics.”
 - 2001 Supervisor for Daniel Atkins, GU
“Approximate Master Equations for Atom Optics”
 - 2000 Supervisor for Zoe Brady, GU
“Robustness of Measurements of the Fluorescence of a two-level atom.”
 - 2000 Co-supervisor for Damian Sypher, UQ
“Nuclear Magnetic Resonance: Emulating Quantum Computation.”
 - 1999-00 Co-supervisor for Dian Wahyu Utami, UQ
“Measuring the state of a qubit using a single-electron transistor.”
 - 1999 Supervisor for Prahlad Warszawski, UQ
“Adiabatic Elimination in Quantum Feedback Systems”
 - 1999 Supervisor for Ben Hollis, UQ.
“Quantum Computation for Today’s Quantum Computers.”
 - 1997 Supervisor for Gilman Toombes, UQ.
“Measurement and Feedback of a Driven Two-Level Atom.”

Postgraduate Research Supervision⁴

- 2023 Principal Supervisor (external) for MS student, Rashi R. Kaimal, SVNIT, Surat, India,
“Bohmian Filtering: A comparison of linear Gaussian filtering in classical and Bohmian mechanics”
- 2022– Co-Supervisor for PhD student, Ingita Bannerjee.
- 2022– Principal Supervisor for PhD student, Ori Somech.
- 2021– Co-Supervisor for PhD student, Nattaphong Wonglakhon.
- 2021–22 Principal Supervisor (external) for MS student, Amal V S, IISER Kolkata, India.
“Calculation of the cavity dwell times of eventually reflected and transmitted photons using quantum weak values, to model an atomic cloud”
- 2021–25 Principal Supervisor for PhD student, Lucas Ostrowski.
“On the Heisenberg Limit for Laser Coherence: Generalisations to Nonclassical Beams; Towards Experimental Realisation”
- 2021–24 Co-Supervisor (external) for PhD student, Soroush Khademi, University of Queensland.
“Optomechanical monitoring of quantum Brownian motion and the challenge of Heisenberg”
- 2019–23 Principal Supervisor for PhD student, Qiucheng Song,
“The Power of Einstein-Podolsky-Rosen Steering”
- 2018–22 Principal Supervisor for PhD student, Aníbal Utreras-Alarcón
“On Extended Wigner’s Friend Scenarios”

⁴ Supervision listed only when I participated to the extent of leading to joint papers, regardless of official status.

[Received the 2022 Chancellor's Medal \(one of four at GU\).](#)

- 2018–22 Principal Supervisor for PhD student, Kiarn Laverick
“Quantum State Smoothing: General Properties and Applications to Linear Gaussian Systems”
- 2017–20 Co-Supervisor (external) for PhD student, Prahlad Warszawski, University of Sydney
“Quantum Trajectories for, and as, understanding”
- 2017–21 Principal Supervisor for PhD student, Travis Baker.
“Quantum correlations: Schrödinger’s steering in lossy conditions; Heisenberg’s limit to laser coherence.”
- 2014–18 Co-Supervisor for PhD student, Shuming Cheng.
“Tradeoffs in Coherence and Multiparty Quantum Correlations”
- 2013–17 Associate Supervisor for Sabine Wollmann.
“Resources for optical quantum information science and technology”
- 2013–17 Principal Supervisor for PhD student, Li (Kenny) Li.
“On non-Markovianity in Open Quantum Systems”
- 2012–16 Co-Supervisor for PhD student, Shakib Daryanoosh, Ph.D., GU.
“Quantum Measurement and Control: Theory and Experiments in Solid-state and Quantum Optics”
- 2012–16 Principal Supervisor for PhD student, Ivonne Guevara, Ph.D., GU.
“Quantum State Smoothing”
- 2010–13 Associate Supervisor for Dylan Saunders, Ph.D., GU.
“Quantum Correlations: Experimental EPR-Steering, Bilocality, and Weak Tomography in Photonic Quantum Information Science”.
- 2009–14 Principal Supervisor for David Evans, Ph.D., GU.
“Coping With Loss: Detection-Loophole-Free, and Optimally Loss-Tolerant Tests of Einstein-Podolsky-Rosen-Steering
- 2007–10 Associate Supervisor for Brendon Higgins, Ph.D., GU.
“Quantum Measurement: Concepts and algorithms in photonic quantum information science”
[Received the 2010 Chancellor's Medal \(one of four at GU\).](#)
[Queensland Branch nominee for 2012 Bragg Medal of Australian Institute of Physics](#)
- 2006–11 Principal Supervisor for Andy Chia, Ph.D., GU.
“Explorations in Quantum Measurement and Control”
[Received an Academic Excellence listing by GU](#)
[Queensland Branch nominee for 2013 Bragg Medal of Australian Institute of Physics](#)
- 2005–07 Associate Supervisor for Mark Dowling, Ph.D., UQ.
“Entanglement, Geometry, and Quantum Computation”
- 2005–08 Principal Supervisor for Steve Jones, Ph.D., GU.
“Verifying Entanglement of Constrained Bipartite Quantum Systems”
- 2004–10 Principal Supervisor for Joshua Combes, Ph.D., GU.
“Rapid Measurement and Purification using Quantum Feedback Control”
- 2003–06 Principal Supervisor for Neil Oxtoby, Ph.D., GU.
“Keeping it Real: A quantum trajectory approach to realistic measurement of solid-state quantum systems.”

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- 2000–04 Principal Supervisor for Laura Thomsen, Ph.D., GU
“Using Quantum Feedback to Control Nonclassical Correlations in Light and Atoms”
 - 2000–04 Principal Supervisor for Jay Gambetta, Ph.D., GU
“Non-Markovian Stochastic Schrödinger Equations and Interpretations of Quantum Mechanics”
 - 2000–02 Principal Supervisor for Prahlad Warszawski, M.Phil., GU
“Quantum Trajectories for Realistic Detection.”
 - 1998–01 Principal Supervisor for Jin Wang, Ph.D., UQ
“Decoherence Control by Quantum Interference and Homodyne-Mediated Feedback.”
 - 1998–01 Principal Supervisor for Dominic Berry, Ph.D., UQ
“Adaptive Phase Measurements.”
 - 1995–96 Co-supervisor for Stephen Choi, M.Sc., AU
“Quantum aspects of the biochromatic beam splitter for two-level atoms.”
 - 1995–96 Co-supervisor for Rowan Killip, M.Sc., (in Mathematics), AU
“An appraisal of phase measurements”

Visiting Postgraduate Student Supervision

- 2024 Supervisor for visiting PhD student, Pierre Guilmin, ENS des mines de Paris
- 2022–23 Co-Supervisor for visiting PhD student, Yile Ying, Perimeter Institute
- 2017 Supervisor for visiting PhD student, Marek Wajs, National University of Singapore
- 2016 Supervisor for visiting PhD student, Yu Xiang, Peking University
- 2014 Supervisor for visiting PhD student, Areeya Chantasri, University of Rochester
- 2013 Supervisor for visiting PhD student, Colin Teo, National University of Singapore
- 2012 Supervisor for visiting PhD student, Nicola Dalla Pozza, University of Padua
- 2011–12 Supervisor for visiting PhD student, Li Li, University of Science and Technology of China.

Notable University Service

- 2021–24 Griffith Sciences Senior Leadership Committee (chaired by PVC), Member
- 2019–24 Griffith Sciences Research Committee (chaired by Dean), Member
- 2017–18 ERA “Academic Adviser” for Physical Sciences.
- 2014–15 ERA “Academic Adviser” for Physical Sciences.
- 2014–15 Griffith Sciences Research Committee (chaired by Dean), Member
- 2011–12 SEET Group Project Team for ERA, Member
- 2010–11 Research Committee (chaired by DVCR), Member
- 2010 Acting Head of Physics
- 2009–10 SEET Group Project Team for ERA, Member (responsible for Physics and Maths)
- 2007–8 Head of “Theoretical and Quantum Physics Group” for RQF
- 2007–14 SEET Group Research Committee (chaired by Dean), Member
- 2004–5 School Committee (chaired by Head of School), Member

External Grants⁵

Total as of 2025: c. \$26.6M (2025 dollars) external income coming to my institution of employment, of which c. \$15.2M from grants on which I was first-named or sole investigator from that institution.

- 2025 Australian Research Council Discovery Grant (4 years, \$957k).
“Advancing Quantum Experiments to Test Reality Beyond Bell’s Theorem”, DP250102162
Chief Investigators: Wiseman, Tischler, Cavalcanti.
- 2024 Queensland Department of Environment, Science and Innovation grant
(5 years, \$10M; \$3.2M to GU)
“Queensland Quantum Decarbonisation Alliance”
Proposal Lead: Warwick Bowen, University of Queensland
Griffith Investigators: Wiseman, Gould, Garland, Slussarenko.
- 2023 U.S. Air Force Office of Scientific Research R&D Proposal 23IOA086 (5 years, US\$646k)
“Creating Quantum States and Connecting Networks: Cybersecurity through the Lens of Nonlocality”
Principal Investigators: Tischler, Wiseman, Baker.
- 2023 Baumann Foundation Research Grant (1 year, €2k, equally split) for
Wigner’s Friend collaboration travel, Veronika Baumann and Howard Wiseman.

⁵ by year of commencement.

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- 2022 Australian Research Council Discovery Grant (4 years, \$513k; \$410k to GU).
“Heisenberg-limited lasers: building the revolution”, DP220101602
Chief Investigators: Wiseman, Berry.
- 2021 Commonwealth Government, Australia–United States Multi-University Research Initiative (AUSMURI) (renewal, 2 years, \$2.0M, of which \$0.75M to GU).
“Quantum control based on real-time environment analysis by spectator qubits”
Paz Silva, Wiseman, Ferrie, Morello.
- 2020 Foundational Questions Institute (2 years, US\$63k).
“Quantum and consciousness: paths to experiment, and implications for interpretations”,
FQXi-RFP-CPW-2019
Wiseman, Cavalcanti, Tilloy, and Evans.
- 2018 Commonwealth Government, Australia–United States Multi-University Research Initiative (AUSMURI) (3 years, \$3.0M, of which \$0.75M to GU).
“Quantum control based on real-time environment analysis by spectator qubits”
Paz Silva, Wiseman, Ferrie, Morello.
- 2018 Australian Research Council Centre of Excellence (7 years, \$33.7M).
“Centre for Quantum Computation and Communication Technology”, CE170100012
Simmons, Hollenberg, Ralph, Pryde, Lam, Dzurak, Wiseman *et al.*
(as Node Manager, responsible for GU’s ARC budget of \$4.6 million)
- 2017 Australian Research Council Discovery Grant (3 years, \$314 000 to GU).
“Ultimate quantum limits to coherence”, DP170101734
Chief Investigator: Wiseman
- 2015 Foundational Questions Institute (2 years, US\$104 000).
“How do measurement events emerge from Many Interacting Worlds?”
Principal Investigators: Wiseman and Hall
- 2015 Foundational Questions Institute (2 years, US\$94 000).
“Events, agents, and causation in ontological models of quantum theory”
Principal Investigator: Cavalcanti. Co-Investigator: Wiseman
- 2014 Australian Research Council Discovery Grant (3 years, \$450 000).
“Unconditional photonic entanglement verification and quantum metrology using fast, ultra-high-efficiency photon detectors”, DP140100648
Chief Investigators: Pryde, Hall, and Wiseman
- 2011 US Department of Defense, MURI project (5 years)
“Control of Quantum Systems: Theory and Experiments” (Lidar, PI)
One of 13 Members (travel-funding only, as at a non-US university).
- 2011 Templeton Foundation (2 years, US\$20 500, to GU).
“Non-Linearity and Quantum Mechanics: Quest for a Rogue Wave Mechanics”
Samuel Colin, Thomas Durt, Ralph Willox and Howard Wiseman.
- 2011 Australian Research Council Centre of Excellence (7 years, \$24.5 million).
“Centre for Quantum Computation and Communication Technology”, CE110001027
Executive Committee: Simmons, Hollenberg, Ralph, Wiseman, Lam, and Dzurak.
(as Node Manager, responsible for GU’s ARC budget of \$2.4 million).
- 2009 Perimeter Institute (Canada) External Funding (3 years, \$33 000 to GU)
plus \$33,000 transferred to GU from ARC DP held by Price at U.Syd.
Part of the “Perimeter Institute – Australia Foundations (PIAF) partnership”
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- Australian Management Committee members: Price, Milburn, and Wiseman.
- 2009 Australian Research Council Discovery Grant (3 years, \$410 000 to GU).
“Quantum limits in measurement and communication”, DP0986503
Chief Investigators: Pryde, Bartlett, Doherty, and Wiseman
- 2008 Australian Research Council Centre of Excellence renewal (3 years, \$10.1 million).
“Centre for Quantum Computer Technology” (Clark, Director), CE0348250
(one of 21 Chief Investigators, responsible for an ARC budget of \$420 000).
- 2007 Australian Research Council Discovery Grant (3 years, \$570 000, to GU).
“Quantum computing with trapped ions”, DP0773354
Chief Investigators: Kielpinski and Wiseman.
- 2004 Australian Research Council Federation Fellowship (5 years, \$1.5 million).
“Quantum Information, Measurement, and Control”, FF0458313
- 2003 Queensland Government “Smart State” Centre Funding (5 years, \$225 000, to GU).
“Centre for Quantum Computer Technology”
- 2003 Australian Research Council Centre of Excellence (5 years, \$14 million).
“Centre for Quantum Computer Technology” (Clark, Director), CE0348250
(one of 18 Chief Investigators, responsible for an ARC budget of \$770 000).
- 2002 Australian Research Council Discovery Grant (3 years, \$211 000, to GU).
“Novel aspects and applications of quantum measurement theory”, DP0208939
Chief Investigators: Wiseman and Pegg.
- 1999 Australian Research Council QEII Research Fellowship (5 years, \$570 000).
“Non-Markovian Dynamics of Open Quantum Systems”, F69937030
- 1999 Australian Research Council Small Grant (1 year, \$25 000, to UQ).
“First experimental realisation of a quantum-limited arbitrary phase measurement”
Chief Investigators: Heckenberg, Wiseman, and Truscott.
- 1996 Australian Research Council Postdoctoral Research Fellowship (3 years, \$173 000).
“Physical Realizations for Quantum-Limited Measurements on Light and Atoms”, F69600016

PUBLICATIONS

Books

1. H. M. Wiseman and G. J. Milburn,
Quantum Measurement and Control
(Cambridge University Press, Cambridge, 2010): 476 pages. DOI: 10.1017/CBO9780511813948
Sales to mid-2021: >1700

Editing

2. Eric G. Cavalcanti, Curtis J. Broadbent, Stephen P. Walborn, and Howard M. Wiseman (editors),
Feature Issue: *80 years of Steering and the Einstein-Podolsky-Rosen Paradox* [Introduction]
J. Opt. Soc. Am. B **32**, 4, EPR1-2 (2015). DOI: 10.1364/JOSAB.32.00EPR1
1. S. Mancini, V. I. Man'ko, and H. M. Wiseman (editors),
Special Issue on *Quantum Control* [editorial]
J. Opt. B Quantum and Semiclassical Optics **7**, S177 (2005)

Invited Book Chapters

- B6 H. M. Wiseman,
 “Transmarine campaigns by the ‘historical’ Arthur: trends in modern fiction”
Arthur, la mer et la guerre
Civilisation médiéval 26 (Classiques Garnier, Paris, 2017).
 edited by Alban Gautier, Marc Rolland and Michelle Szkilnik, pp. 173–193
- B5 Howard M. Wiseman and Eric G. Cavalcanti,
 “*Causarum Investigatio* and the Two Bell's Theorems of John Bell”
Quantum [Un]speakables II: Half a Century of Bell's Theorem,
The Frontiers Collection (Springer, Switzerland, 2017)
 edited by Reinhold Bertlmann and Anton Zeilinger, pp. 119–142.
- B4 H. M. Wiseman and J. Eisert,
 “Nontrivial quantum effects in biology: A skeptical physicists’ view”
Quantum Aspects of Life,
 (Imperial College Press, London, 2008)
 edited by D. Abbot, P. C. W. Davies, and A. K. Pati, pp. 381–401
- B3 R. Van Handel, J. K. Stockton, H. Mabuchi and H. M. Wiseman,
 “Quantum State Preparation of Spin Ensembles by Continuous Measurement and Feedback”
Quantum Information with Continuous Variables of Atoms and Light
 (Imperial College Press, London, 2007)
 edited by N. J. Cerf, G. Leuchs, and E. S. Polzik, pp. 463–486
- B2 H. M. Wiseman,
 “Squeezing and Feedback”
Quantum Squeezing (Springer, Berlin, 2004)
 edited by P.D. Drummond and Z. Ficek. pp. 171-223
- B1 H. M. Wiseman,
 “Complementarity in Spontaneous Emission: Quantum Jumps, Staggers and Slides”
Directions in Quantum Optics (Springer, Berlin, 2001)
 Lecture Notes in Physics **561**
 edited by Howard J. Carmichael, Roy J. Glauber, and Marlan O. Scully, pp. 347-357

Refereed Journal or Book Papers

Refereed Papers as Sole Author

- S25 “Arthur, Authors, and Authorities: The Influence of Modern Historians on Arthurian Historical Fiction” (Article)
Arthuriana **31**, 3, pp. 40–81 (2021). <https://doi.org/10.1353/art.2021.0025>
- S24 “How many principles does it take to change a light bulb ... into a laser?” (Invited commentary)
Physica Scripta **91**, 033001 [10 pages] (2016).
- S23 “The Two Bell’s Theorems of John Bell” (Invited review)
J. Phys. A **47**, 424001 [31 pages] (2014) (Special Issue, *50 years of Bell’s theorem*).
- S22 “Quantum discord is Bohr’s notion of non-mechanical disturbance introduced to counter the Einstein-Podolsky-Rosen argument”
Ann. Phys. (N.Y.) **338**, 361–374 (2013).
- S21 “A British legion stationed near Orléans c. 530? Evidence for Brittonic military activity in late antique Gaul in *Vita Sancti Dalmatii* and other sources”
Journal of the Australian Early Medieval Association **7**, 9–31 (2011).
- S20 “Grounding Bohmian Mechanics in Weak Values and Bayesianism”
New J. Phys. **9**, 165 (12 pages) (2007).
- S19 “From Einstein’s Theorem to Bell’s Theorem: A History of Quantum Nonlocality”
Contemp. Phys. **47**, 79–88 (2006).
- S18 “Defending Continuous Variable Teleportation: Why a laser is a clock, not a quantum channel”
J. Opt. B: Quant. Semiclass. Opt. **6**, S849–S859 (2004).
- S17 “Comment: There is no unmet requirement of optical coherence for continuous-variable quantum teleportation”
Journal of Modern Optics **50**, 1797–1800 (2003).
- S16 “Directly Observing Momentum Transfer in Twin-Slit ‘Which-Way’ Experiments”
Physics Letters A **311**, 285–291 (2003).
- S15 “Weak values, quantum trajectories, and the cavity-QED experiment on wave-particle correlation”
Phys. Rev. A **65**, 032111 (6 Pages) (2002).
- S14 “The derivation of the date of the Badon entry in the *Annales Cambriae* from Bede and Gildas”
Parergon **17**, 1–10 (2000).
- S13 “Light amplification without stimulated emission: Beyond the standard quantum limit to the laser linewidth”
Phys. Rev. A **60**, 4083–4093 (1999).
- S12 “Squashed States of Light: Theory and Applications to Quantum Spectroscopy”

- J. Opt. B: Quant. Semiclass. Opt. **1**, 459-463 (1999).
- S11 “Extending Heisenberg's measurement-disturbance relation to the twin-slit case”
Found. Phys. **28**, 1619-1631 (1998).
- S10 “In-loop squeezing is like real squeezing to an in-loop atom”
[Phys. Rev. Lett.](#) **81**, 3840-3843 (1998).
- S9 “Bohmian analysis of momentum transfer in *welcher Weg* measurements”
Phys. Rev. A **58**, 1740-1756 (1998).
- S8 “Defining the (atom) laser”
Phys. Rev. A **56**, 2068-2084 (1997).
- S7 “Quantum trajectories and quantum measurement theory”
Quantum Semiclass. Opt. (JEOS B) **8**, 205-222 (1996).
- S6 “Adaptive phase measurements of optical modes: Going beyond the marginal Q distribution”
[Phys. Rev. Lett.](#) **75**, 4587-4590 (1995).
- S5 “SU(2) distribution functions and measurement of the fluorescence of a two-level atom”
Quantum Semiclass. Optics (JEOS B) **7**, 569-584 (1995).
- S4 “Feedback in Open Quantum Systems” (Invited Brief Review Article)
Modern Physics Lett. B **9**, 629-654 (1995).
- S3 “Using feedback to eliminate back-action in quantum measurements”
Phys. Rev. A **51**, 2459-2468 (1995).
- S2 “Quantum theory of continuous feedback”
Phys. Rev. A **49**, 2133-2150 (1994); Errata *ibid.*, **49** 5159 (1994) and *ibid.* **50**, 4428 (1994).
- S1 “Stochastic quantum dynamics of a continuously monitored laser”
Phys. Rev. A **47**, 5180-5192 (1993).

Refereed Papers as Joint Author⁶

- J231 Nattaphong Wonglakhon, Howard M. Wiseman, and Areeya Chantasri,
“Completely positive trace-preserving maps for higher-order unraveling of Lindblad master equations”
Phys. Rev. A **110**, 062207 (2024). <https://doi.org/10.1103/PhysRevA.110.062207>
- J230 Shakib Daryanoosh, Geoff J. Pryde, Howard M. Wiseman, and Sergei Slussarenko,
“Experimental investigation of a multiphoton Heisenberg-limited interferometric scheme: The effect of imperfections”
Phys. Rev. A **110**, 012614 (2024). <https://doi.org/10.1103/PhysRevA.110.012614>
- J229 Alex Pepper, Travis. J. Baker, Yuanlong Wang, Qiu-Cheng Song, Lynden. K. Shalm, Varun. B. Varma, Sae Woo Nam, Nora Tischler, Sergei Slussarenko, Howard. M. Wiseman, Geoff. J. Pryde,
“Scalable multiparty steering based on a single pair of entangled qubits”
[AVS Quantum Sci.](https://doi.org/10.1116/5.0197186) **6**, 021401 (2024). <https://doi.org/10.1116/5.0197186>
 - featured on the cover of [AVS Quantum Science](#).
- J228 Aníbal Utreras-Alarcón, Eric G. Cavalcanti, and Howard M. Wiseman,
“Allowing Wigner's friend to sequentially measure incompatible observables”
Proc. Roy. Soc. A **480**, 20240040 (2024).
- J227 Kiarn T. Laverick, Areeya Chantasri, Prahlad Warszawski, and Howard M. Wiseman,
“Quantum state smoothing cannot be assumed classical even when the filtering and retrofiltering are classical”
[PRX Quantum](https://doi.org/10.1103/PRXQuantum.4.040340) **4**, 040340 (2023). <https://doi.org/10.1103/PRXQuantum.4.040340>
- J226 Howard M. Wiseman, Eric G. Cavalcanti, and Eleanor G. Rieffel,
“A ‘thoughtful’ Local Friendliness no-go theorem: a prospective experiment with new assumptions to suit”
[Quantum](https://doi.org/10.22331/q-2023-09-14-1112) **7**, 1112 (2023). <https://doi.org/10.22331/q-2023-09-14-1112>
- J225 Qiu-Cheng Song, Travis J. Baker, and Howard M. Wiseman,
“Shareability of steering in 2-producible states”
Phys. Rev. A **108**, 012216 (2023). <https://doi.org/10.1103/PhysRevA.108.012216>
- J224 Qiu-Cheng Song, Travis J. Baker, and Howard M. Wiseman,
“On the power of one pure steered state for EPR-steering with a pair of qubits”
[New J. Phys.](https://doi.org/10.1088/1367-2630/accfba) **25** 053005 (2023). <https://doi.org/10.1088/1367-2630/accfba>
- J223 L. A. Ostrowski, T. J. Baker, S. N. Saadatmand, and H. M. Wiseman,
“Optimized laser models with Heisenberg-limited coherence and sub-Poissonian beam photon statistics”
Phys. Rev. A **107**, 053702 (2023). <https://doi.org/10.1103/PhysRevA.107.053702>
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