

Christopher Alan Fuchs

Curriculum Vitae

13 February 2024

Personal:

Work address: Department of Physics
University of Massachusetts Boston
100 Morrissey Boulevard
Boston, Massachusetts 02125

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<https://QBism.org>
<http://scholar.google.com/citations?user=fe9uXzkAAAAJ>

Research Interests:

Quantum foundations in the light of quantum information
Quantum information theory
QBism

Professional Positions (beyond postdoctoral level):

Professor of Physics, University of Massachusetts Boston, 2015–
Research Fellow, Max Planck Institute for Quantum Optics, Garching, Germany, 2014
Senior Scientist, Raytheon BBN Technologies, Cambridge, Massachusetts, 2013–2014
Senior Researcher, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 2007–2013
Member of Technical Staff, Bell Laboratories, Alcatel-Lucent, Murray Hill, New Jersey, 2000–2007

Education:

Ph. D. in Physics, May 1996, The University of New Mexico, Albuquerque, New Mexico
Dissertation: “Distinguishability and Accessible Information in Quantum Theory”
Advisor: Carlton M. Caves

B. S. in Physics with High Honors, December 1987
B. S. in Mathematics with High Honors, December 1987
The University of Texas at Austin, Austin, Texas
Research Supervisor: John Archibald Wheeler

Titles, Honors, Awards, Marks of Distinction:

Fellow of the American Physical Society. Elected 2012, “for powerful theorems and lucid expositions” that culminated in the view of quantum theory known as QBism.

International Quantum Communication Award, 2010, citation: “for contributions to the theory of quantum communication including quantum state disturbance.”

Lee A. DuBridge Prize Postdoctoral Fellowship, California Institute of Technology, Pasadena, California, 1996–1999.

Paper A49 was listed among the “Top Ten Breakthroughs of 1998” by the editors of *Science*.

The Web of Science Citation Index gives a citation count of $\geq 8,000$, with a Hirsch index $h = 35$ and an average of 148/paper, on the 54 (of 58) *journal articles* it lists for me. Google Scholar currently gives a citation count of $\geq 18,200$, with an $h = 58$, on my *full record* of 171 published or posted scholarly contributions.

Quoted in *The Oxford Dictionary of American Quotations*, Second Edition, selected and annotated by H. Rawson and M. Miner, (Oxford University Press, Oxford, UK, 2006), p. 742.

Co-originator of the so-called “Fuchs – van de Graaf Inequalities.”

Chancellor’s Award for Distinguished Scholarship, University of Massachusetts Boston, November 2021.

Member, Scientific Advisory Board, Center for Contemplative Research, Crestone, Colorado, with Steven Chu, David Chalmers, Marcelo Gleiser, and five others, since 2020.

Permanent Fellow of the Stellenbosch Institute for Advanced Study (STIAS). In residence March/April 2012, May/June 2017, May/June 2018, and July/August 2019.

Chair, Executive Committee, American Physical Society Topical Group on Quantum Information (now the APS Division of Quantum Information), 2011.

For Fun: Academic Lineage – F. S. Exner, F. Hasenöhl, K. Herzfeld, J. A. Wheeler, K. S. Thorne, C. M. Caves, C. A. Fuchs. Erdős number – 3 (but who doesn’t have one). Einstein number – 3 (Einstein–Rosen–Peres–Fuchs).

Some More-Prominent Media Profiles of My Work:

My work has been mentioned in the New York Times, Wall Street Journal, Forbes Magazine, National Public Radio, and a number of other places, including improbably the Colorado Springs Gazette sports section. See pages 30–37 for a list of known items. Collected here are some of the more in-depth reports.

Bryan Walsh, “Christopher Fuchs is revolutionizing how we understand our quantum reality,” profile as part of the “2023 Vox Future Perfect 50” list of “thinkers, activists, and scholars working on solutions to today’s (and tomorrow’s) biggest problems,” *Vox.com*, 29 November 2023.

Bob Henderson, “My Quantum Leap: The theory of physics that showed me a new reality,” *Nautilus Magazine*, cover story, 23 February 2022.

Klaus Bachmann, “Jede Messung kreiert etwas Neues im Universum,” Katharina Gschwendtner, ill., *GEOkompakt*, Issue 69, 80–83, December 2021.

Corey S. Powell, “Quantum Physics Is No More Mysterious Than Crossing the Street: A Conversation with Chris Fuchs,” *Discover Magazine*, 29 November 2019.

Anders Kvellestad, “Tumbling Down a Quantum Rabbit Hole,” *Mentsch Magazine*, 29 September 2017.

Joe Gelonesi, “Why the Multiverse Is All about You,” posted at ABC Radio National (Australia), 25 September 2015.

Amanda Geffer, “A Private View of Quantum Reality,” *Wired*, 14 June 2015.

Ulf von Rauchhaupt, “So liegt denn alles im Auge des Betrachters,” *Frankfurter Allgemeine Sonntagszeitung*, Nr. 6, page 62, 9 February 2014.

Hans Christian von Baeyer, “Quantum Weirdness? It’s All in Your Mind,” cover story, *Scientific American* **308**, 46–51 (June 2013).

Hervé Poirier, “L’information relance la quantique,” *Science et Vie*, Hors Série N° **260**, 100–102 (2012).

Eric Cavalcanti, “Quantum Subversives,” *American Scientist* **99**, 500–502 (2011).

Andreas Trabelinger, “Inside quantum information,” *Nature Physics* **7**, 443–444 (June 2011).

Paul Wells, “Solving the universe,” *Maclean’s Magazine* **123**, 17–24 (27 September 2010).

Other Tokens of Recognition:

JILA Visiting Fellow, Boulder, Colorado, 6 weeks, Spring 2023.

Member-at-Large, Executive Committee, Forum for History and Philosophy of Physics, American Physical Society, April 2023 – April 2026.

Member, Advisory Board, SheQuantum: Quantum Computing for Women, a not-for-profit eLearning platform, since February 2021.

University of Massachusetts Boston College of Science and Mathematics Outstanding Research Award for Tenured Faculty, June 2020.

Member, Editorial Board, Springer book series *Fundamental Theories of Physics*, since 2009.

Member, Editorial Board, Springer book series *The Western Ontario Series in Philosophy of Science*, since 2010.

Board Member, International Center for Mathematical Modeling, Linnaeus University, Sweden, since 2001.

Member, Award Committee, the Austrian Academy of Sciences’ *Paul Ehrenfest Best Paper Award for Quantum Foundations*, 2019–2020.

Academic Visitor, Faculty of Philosophy, University of Oxford, Summer 2017.

Invited Member, Foundational Questions Institute (FQxI), since 2010.

Guest Professor, Quantum ICT Research Institute, Tamagawa University, Tokyo, Japan, since 2000.

Adjunct Professor of Physics and Astronomy, University of New Mexico, Albuquerque, New Mexico, 2006 – present. (Adjunct Assistant Professor, 2000–2005.)

Adjunct Professor of Physics, University of Waterloo, Waterloo, Ontario, 2008–2016.

Affiliate, Institute for Quantum Computing, University of Waterloo, 2008–2016.

Associate Editor, *Quantum Information and Computation*, Rinton Press, 2000–2012.

Member, Scientific Committee, Centre de Recherche Mathématiques, Montréal, Canada, Thematic Semester June–December 2011.

2-Year Member-at-Large, Executive Committee, American Physical Society Topical Group on Quantum Information, 2007–2008.

Member, Judging Panel, Best Student-Paper Award, American Physical Society Topical Group on Quantum Information, 2007.

Member, Technology Experts Panel, United States Advanced Research and Development Activity (ARDA) Roadmap for Quantum Cryptography, 2003–2004.

Member, National Science Foundation Review Panel on Mathematical Physics, 2005.

Member, Pacific Institute of Theoretical Physics, University of British Columbia, Vancouver, Canada, 2004–2008.

Featured in exhibit “The Birth of Cuero and Figures of Captivation,” Cuero Heritage Museum, Cuero, Texas, 19 January – 3 April 2021. (The small town of Cuero is my birthplace.)

Grant and Funding History (\$5.4M career total):

Faculty Mentor (for Avash Subedi), “Real and Complex SICs in Quantum Information,” Oracle Undergraduate Research Fellowship, Fall 2023. **\$750.**

Project Leader (with co-leader J. Pienaar), “What Is Metrology if Quantum Measurements Participate in Making Reality?,” contract for John Templeton Foundation, 1 September 2022 – 31 August 2025. **\$2,454,680**

Principal Investigator (with co-PI B. C. Stacey), “Symmetric Informationally Complete Measurements and Quantum Computation,” contract for National Science Foundation, 1 September 2022 – 31 August 2025. **\$400,000**

Principal Negotiator, “General Donation #62393, to University of Massachusetts Boston,” from John Templeton Foundation, 15 October 2021. **\$50,000.**

Principal Investigator, “Testing QBism: Can an artificial agent learn the Born rule?,” contract for Foundational Questions Institute (FQXi) & Fetzer Franklin Fund Partnership, 15 January 2021 – 31 December 2022. **\$7,590**

Project Leader, “QBism, from Pragmatism to Phenomenology,” Stellenbosch Institute for Advanced Study (STIAS), South Africa, 2019. **~\$45,000.**

Principal Investigator, “Encapsulated Agents in Quantum Theory: Re-examining Wigner’s Friend,” contract for Fetzer Pioneers Fund, 12 January 2019 – 1 August 2019. **\$7,700.**

Principal Investigator, “Encapsulated Agents in Quantum Theory: Re-examining Wigner’s Friend,” contract for Foundational Questions Institute (FQXi) & Fetzer Franklin Fund Partnership, 1 December 2018 – 1 December 2019. **\$7,000.**

Principal Investigator, “Quantum and Classical Bayesian Agents,” contract for Foundational Questions Institute (FQXi), 1 October 2018 – 31 August 2020. **\$56,000.**

Project Leader (with co-leader B. C. Stacey), “Geometric Phases and Symmetric Quantum Measurements,” contract for John Templeton Foundation, 1 July 2018 – 31 December 2020. **\$211,370.**

Principal Investigator, “Quantifying Participatory Realism, Quantifying QBism,” contract for the Fetzer Franklin Fund, 14 August 2018 – 26 February 2022. **\$375,000.**

Faculty Mentor (for Joseph R. Farah), “Unlocking the Structure of Symmetric Quantum Measurements,” Oracle Undergraduate Research Fellowship, Fall 2018 – Spring 2019. **\$1,500.**

Project Leader, “Is It Autonomy All the Way Down? The Search for a QBist Metaphysic,” Stellenbosch Institute for Advanced Study (STIAS), South Africa, 2018. **~\$45,000.**

Principal Investigator, “Why the Quantum? A Video Series,” contract for Foundational Questions Institute (FQXi), 1 December 2016 – 31 December 2017. **\$4,500.**

Project Leader, “International Workshop on Participatory Realism,” Stellenbosch Institute for Advanced Study (STIAS), South Africa, 2017. **~\$45,000.**

Faculty Mentor (for Julio Salazar), “Number Theoretic Aspects of a Symmetric Quantum Measurement,” Oracle Undergraduate Research Fellowship, Spring 2017. **\$750 (deferred).**

Principal Investigator (with co-PI C. G. Timpson), “Does Participatory Realism Make Sense? The Role of Observership in Quantum Theory,” contract for Foundational Questions Institute (FQXi), 1 August 2016 – 31 July 2018. **\$140,959.**

Faculty Mentor (for Michael C. Hoang), “Computer-Aided Explorations of Symmetric Quantum Measurements,” Oracle Undergraduate Research Fellowship, Fall 2016 – Spring 2017. **\$1,500.**

Principal Investigator, “Workshop on the Quanta within the Quantum,” contract for Foundational Questions Institute (FQXi), 1 July 2015 – 30 June 2016. **\$6,643.**

Principal Negotiator, “General Donation #57800, to UMass Boston Physics Department,” from John Templeton Foundation, 9 January 2015. **\$30,000.**

Project Leader, “That the World Can Be Shaped: Quantum Bayesianism, Counterfactuals, Free Will,” contract for John Templeton Foundation, 1 April 2011 – 31 March 2013. **\$50,000.**

Project Leader, “Tightening the Consistency of Quantum Bayesianism,” Stellenbosch Institute for Advanced Study (STIAS), South Africa, 2012. **~\$50,000.**

Principal Investigator, “SIC Representations for Quantum States and Quantum Channels” contract for United States Office of Naval Research, 1 October 2008 – 31 December 2012. **\$511,913.**

Senior Personnel, “REU Site: Susquehanna University REU in Mathematics,” contract for National Science Foundation Research Experience for Undergraduate (REU) Program, Spring 2008 – Spring 2011. **\$150,000.**

Principal Investigator (with C. Beisbart, S. Hartmann, and V. Palge), “Antrag zur Foerderung einer Konferenz mit anschließender Sommerschule,” contract for German VolkswagenStiftung, (funds used to organize conference “Being Bayesian in a Quantum World,” 1–5 August 2005, Konstanz, Germany, and an associated summer school). **67,000 EUR ≈ \$81,900.**

Principal Investigator, E. T. S. Walton Visitor Award, Science Foundation Ireland, Communications Network Research Institute, Dublin, Ireland, April 2003 – August 2004. **251,964 EUR ≈ \$317,000.**

Principal Investigator (with C. M. Caves), “Theoretical Investigations in Quantum Information Science: Quantum Nonlocality and Entanglement,” contract for United States Office of Naval Research, 1 April 2000 – 31 March 2003. **\$300,000.**

Awarded, Endowed, or Keynote Lectures:

Colloquium Ehrenfestii, University of Leiden, The Netherlands, 10 April 2024 (upcoming).
JILA Fellows Colloquium, University of Colorado Boulder, 16 February 2023.
Special Lecture, International Seminar on Quantum Physics and Emptiness in Buddhist Philosophy, Namgyal Institute for Tibetology, Gangtok, Sikkim, India, 28 March 2018. (The Dalai Lama was to preside over the meeting, but he became ill during the time of it.)
Keynote Lecture, 5th Tübingen Summer School in the History and Philosophy of Science, Probability and Quantum Mechanics, Tübingen, Germany, 2 August 2016.
CHAST Public Lecture, Committee for Human Aspects of Science and Technology, University of Sydney, Australia, 25 March 2015.
Valedictory Talk, International School on Quantum & Nano Computing Systems and Applications, Dayalbagh Educational Institute, Agra, India, 1 December 2013.
Keynote Speaker, Fifth International Quantum Interactions Symposium, Aberdeen, Scotland, 27 June 2011.
Clifford Lecturer, Tulane University, New Orleans, Louisiana, 14–17 March 2011.
Itamar Pitowsky Memorial Lecturer, Hebrew University, Jerusalem, Israel, 16 February 2011.
Squire Lecturer, Grinnell College, Grinnell, Iowa, 30 April – 4 May 2006.
Michelson Postdoctoral Prize Lectureship, Case Western Reserve University, Cleveland, Ohio, 1998.

Postdoctoral Fellowships:

Director-Funded Postdoctoral Fellowship, Los Alamos National Laboratory, Los Alamos, New Mexico. Sponsor: Salman Habib. (October 1999 – October 2000)
Lee A. DuBridge Prize Postdoctoral Fellowship, California Institute of Technology, Pasadena, California. Sponsors: H. Jeff Kimble and John Preskill. (October 1996 – October 1999)
Postdoctoral Fellowship, Département I.R.O., Université de Montréal, Montréal (Québec), Canada. Sponsor: Gilles Brassard. (January 1996 – October 1996)

Organizational Activities:

Co-organizer (with M. Gleiser and J. Pienaar), *Participatory Reality and Quantum Metrology*, Dartmouth College, Hanover, New Hampshire, 24–27 June 2024.
Member, Organisation Committee, *Quantum Information and Probability: from Foundations to Engineering (QIP24)*, Linnaeus University, Växjö, Sweden, 11–14 June 2024.
Organizer and Chair for invited symposium, “Thirty Years of Quantum Computing since Shor’s Algorithm,” *American Physical Society March Meeting 2024*, Minneapolis, Minnesota, 3–8 March 2024.
Member, Program Committee, Quantum Information Processing 2024 (QIP 2024), Taipei, Taiwan, 13–19 January 2024.
Member, International Advisory Committee, *International Conference on Quantum Computing and Communications (QCC-2023)*, Baba Farid College, Bathinda, Punjab, India, 9–11 February 2023.
Member, Program Committee, *Quantum Limits of Knowledge II*, Université Grenoble Alpes, Grenoble, France, 29–31 March 2021.
Project Leader, *QBism, from Pragmatism to Phenomenology*, Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa, 15 July – 15 August 2019.
Co-organizer (with R. Schack), Special Session “QBism in Växjö: A Celebration,” *Quantum Information Revolution: Impact to Foundations!? (QIR)*, Linnaeus University, Växjö, Sweden, 10–13 June 2019.
Member, Program Committee, *Quantum Limits of Knowledge*, Niels Bohr Institute, Copenhagen, Denmark, 19–21 June 2019.

- Co-organizer (with M. S. Leifer), *Workshop on Encapsulated Agents in Quantum Theory: Re-examining Wigner's Friend*, Boston, Massachusetts, 9–10 March 2019.
- Organizer, Quantum Foundations Focus Sessions (Sessions V27, X27, Y27), *American Physical Society March Meeting*, Boston, Massachusetts, 4–8 March 2019.
- Project Leader, *Is It Autonomy All the Way Down? The Search for a QBist Metaphysic*, Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa, 20 May – 15 June 2018.
- Organizer (with R. Schack), *International Workshop on Participatory Realism*, Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa, 6–8 June 2017.
- Co-organizer (with J.-Å. Larsson), *Discrete Structures in Quantum Mechanics: Workshop on SICs and MUBs, Existence and Usefulness in Quantum Physics*, Linköping University, Linköping, Sweden, 20–22 June 2016.
- Co-organizer (with I. Bengtsson), Special Session “QBism and the Copenhagen Spirit Compared,” *Quantum Theory: From Foundations to Technologies*, Linnaeus University, Växjö, Sweden, 8–11 June 2015.
- Member, Program Committee, *ASCR Workshop on Quantum Computing for Science*, Department of Energy (DOE) Office of Advanced Scientific Computing Research (ASCR), Washington, DC, 17–18 February 2015.
- Member, Program Committee, *17th UK and European Meeting on the Foundations of Physics*, Ludwig Maximilian University, Munich, Germany, 29–31 July 2013.
- Project Leader, *Tightening the Consistency of Quantum Bayesianism*, Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa, 10 March – 22 April 2012. Participating with STIAS Fellows D. M. Appleby, H. Barnum, N. D. Mermin, R. Schack, and C. G. Timpson.
- Co-organizer (with H. Atmanspacher), *The Pauli-Jung Dialog and Its Impact Today*, Filzbach, Switzerland, 23–27 September 2012.
- Co-organizer (with H. Atmanspacher), Special Session “Wolfgang Pauli’s Notion of Quantum Mechanical Incompleteness,” *Quantum Theory: Reconsideration of Foundations – 6*, Linnaeus University, Växjö, Sweden, 11–14 June 2012.
- Co-organizer (with G. Brassard), *Quantum Foundations in the Light of Quantum Information III / Fondements de la mécanique quantique à la lumière de l’information quantique III*, Université de Montréal, Montréal, Canada, 6–9 December 2012.
- Member, Steering Committee, International Conference Series on Quantum Communication, Measurement and Computing (QCMC), 2010–2014.
- Member, Programme Committee, 11th International Conference on Quantum Communication, Measurement and Computing (QCMC 2012), Vienna University of Technology, Vienna, Austria, 30 July – 3 August, 2012.
- Organizer and Chair for invited-speaker sessions, “Quantum Information: Featured Experiments,” “20 Years of Quantum Information in Physical Review Letters,” and “Symmetric Discrete Structures for Finite Dimensional Quantum Systems,” *American Physical Society March Meeting 2011*, Dallas, Texas, 21–25 March 2011.
- Co-organizer (with S. Weinstein and D. Wolpert), *Laws of Nature: Their Nature and Knowability*, Perimeter Institute for Theoretical Physics, Waterloo, Ontario, 20–22 May 2010.
- Member, Advisory Committee (with L. Hardy and H. Price), *PIAF '09: New Perspectives on the Quantum State*, Perimeter Institute for Theoretical Physics, Waterloo, Ontario, 27 September – 2 October 2009.
- Member, International Program and Advisory Committee, *Feynman Festival 2009*, Olomouc, Czech Republic, 22–26 June 2009.
- Co-organizer (with S. T. Flammia), *Seeking SICs: An Intense Workshop on Quantum Frames and Designs*, Perimeter Institute for Theoretical Physics, Waterloo, Ontario, 26–31 October 2008.

- Co-organizer (with G. Bacciagaluppi, L. Hardy, and W. Struyve), *The Clock and the Quantum: Time in Quantum Foundations*, Perimeter Institute for Theoretical Physics, Waterloo, Ontario, 28 September – 2 October 2008.
- Co-organizer (with J.-Å. Larsson), Special Session “Contextuality and Kochen-Specker Theorems,” *Foundations of Probability and Physics – 5*, Växjö University, Växjö, Sweden, 25 August 2008.
- Co-organizer (with A. S. Holevo), *Osamu Hirota, a True Quantum Communication Channel*, Perimeter Institute for Theoretical Physics, Waterloo, Ontario, 25–27 June 2008.
- Co-organizer (with S. H. Simon), *Quantum Information Meets Nanotechnology*, Bell Labs, Lucent Technologies, Murray Hill, New Jersey, 11 July 2006.
- Member, Advisory and Award Committee, *Fifth, Sixth, Seventh, and Eighth International Conferences on Quantum Communication, Measurement, and Computing (QCMC)*, 2000, 2002, 2004, 2006.
- Member, Program Committee, American Physical Society Topical Group on Quantum Information, 2006–2007.
- Co-organizer (with A. Khrennikov), *Foundations of Probability and Physics – 4*, Växjö University, Växjö, Sweden, 4–9 June 2006.
- Member, Nominating Committee, American Physical Society Topical Group on Quantum Information, 2005–2006.
- Co-organizer (with M. O. Scully), *Wheelerfest, a Meeting for Quantum Information and Foundations*, Princeton University, Princeton, New Jersey, 24–25 February 2006.
- Co-organizer (with C. M. Caves, S. Hartmann, and R. Schack), *Being Bayesian in a Quantum World*, Konstanz, Germany, 1–5 August 2005.
- Co-organizer (with H. Barnum, R. Hudson, and A. Khrennikov), *Quantum Theory: Reconsideration of Foundations–2, Quantum Logic Meets Quantum Information*, Växjö University, Växjö, Sweden, 1–6 June 2003.
- Co-organizer (with G. Brassard), *Workshop on Quantum Foundations in the Light of Quantum Information II*, Université de Montréal, Montréal, Canada, 13 October – 3 November 2002.
- Co-organizer (with A. Barg, L. Fortnow, and P. W. Shor), *National Science Foundation Planning Workshop on Quantum Communications, Cryptography, and Coding*, Elmsford, New York, 17–18 January 2002.
- Co-organizer (with P. Lahti and A. Khrennikov), *Quantum Theory: Reconsideration of Foundations, Shannon meets Bohr*, Växjö University, Växjö, Sweden, 17–21 June 2001.
- Co-organizer (with O. Hirota), *Second Tokyo International Quantum Information Seminar*, Oiso Prince Hotel, Oiso, Japan, 11–15 March 2001.
- Co-organizer (with G. Brassard), *Meeting on Quantum Foundations in the Light of Quantum Information and Cryptography*, Université de Montréal, Montréal, Canada, 17–19 May 2000.
- Co-organizer (with O. Hirota), *First Tokyo International Quantum Information Seminar*, Tamagawa University, Tokyo, Japan, 13–14 March 2000.
- Co-organizer (with C. M. Caves and M. H. Holzscheiter), *Northern New Mexico Complexity, Entropy, and Physics of Information Seminar Series*, Santa Fe Institute, Santa Fe, New Mexico, January 2000 – October 2000.

Patents:

- C. A. Fuchs, M. Vasilyev and B. Yurke, “Optical Apparatus Having a Polarization Splitter and Multiple Interferometers,” patent number US 7,463,361 B2; issued 9 December 2008.
- C. A. Fuchs, M. Vasilyev and B. Yurke, “Optical Analyzers of Polarization Properties,” patent number US 7,206,069 B2; issued 17 April 2007.

Postdocs Supervised:

- Jacques Pienaar, University of Massachusetts Boston, March 2019 – September 2022.

Gabriela Barreto Lemos, University of Massachusetts Boston, May 2019 – March 2020.
 Blake C. Stacey, University of Massachusetts Boston, Spring 2015 – Fall 2018.
 Huangjun Zhu, Perimeter Institute for Theoretical Physics, November 2012 – August 2013.
 Åsa Ericsson, Perimeter Institute for Theoretical Physics, March 2009 – July 2011.

Current Students:

Gianluca Cuffaro, PhD student in Physics, Spring 2024 – present.
 Avash Subedi, Honors College undergraduate student, Spring 2022 – present.
 Matthew Weiss, PhD student in Computational Sciences, Spring 2021 – present.
 Mary K. Fries, MS student in Physics, Spring 2021 – present.
 Sachin Gupta, PhD student in Physics, Fall 2020 – present.

Students Supervised:

Ghislaine Coulter-de Wit, University of Massachusetts Boston, “Numerical Investigations of SICs,” MS thesis, Summer 2021 – Summer 2023.
 J. B. DeBroda, University of Massachusetts Boston, “Informationally Complete Measurements and Optimal Representations of Quantum Theory,” PhD thesis, Summer 2015 – Summer 2020.
 A. Khanal, University of Massachusetts Boston, “The Shape of QBism in Real-Vector-Space Quantum Theory,” Honors College thesis, Spring 2019 – Spring 2020.
 J. R. Farah, Oracle Undergraduate Research Fellow, University of Massachusetts Boston, Spring 2018 – Spring 2019. (Joseph was one of the 347 recipients of a \$3M 2020 Breakthrough Prize for his involvement in the Event Horizon Telescope Collaboration.)
 M. C. Hoang, University of Massachusetts Boston, “Computer-Aided Explorations of Symmetric Quantum Measurements,” Honors College thesis, Fall 2016 – Spring 2017.
 H. B. Dang, University of Waterloo, “Studies of Symmetries that Give Special Quantum States the ‘Right to Exist’,” PhD thesis, Fall 2009 – Spring 2015.
 G. N. Tabia, University of Waterloo, “Geometry of Quantum States from Symmetric Informationally Complete Probabilities,” PhD thesis, Fall 2009 – Fall 2013.
 M. A. Graydon, University of Waterloo, “Quaternions and Quantum Theory,” MS thesis, Fall 2009 – Summer 2011.
 E. S. Gould, Perimeter Scholars International, “Searching for Noncovariant Symmetric Informationally Complete Quantum Measurements,” Master’s research, Winter-Spring 2010–2011.
 A. Karlsson, Perimeter Scholars International, “Positive Operator Valued Measures, Frames and the Existence of Symmetric Informationally Complete Measurements,” Master’s research, Winter-Spring 2010–2011.
 L. Piispanen, Perimeter Scholars International, “Symmetric Informationally Complete Positive Operator Valued Measures and Their Connections to the Weyl-Heisenberg Group,” Master’s research, Winter-Spring 2010–2011.
 A. Fenyes, Perimeter Scholars International, “Maximal Consistent Sets and Non-Commutative Probability,” Master’s research, Spring 2010.
 R. Morris, University of Waterloo, “New Ways to Express Quantum Dynamics,” Master’s research, 2008 – 2009.
 Y. Shikano, Tokyo Institute of Technology, Japan, “Seeking SICs,” International Travel Scholarship, February–March 2008.
 H. B. Dang, California Institute of Technology and Princeton University, USA, “Quasi-Orthonormal Bases on the Cone of Positive Operators,” Bell Labs Summer Research Program, Summer 2006.
 M. Pérez-Suárez, University of Vigo, Spain, “Properties of Informationally Complete Measurements,” Communications Network Research Institute Visiting Ph. D. Student, Spring 2004.

- G. G. Plunk, Cornell University, USA, “Investigations on Informationally Complete Measurements,” Bell Labs Summer Research Program, Summer 2002.
- P. F. Scudo, Technion–Israel Institute of Technology, Israel, “Quantum de Finetti Representation Theorems for Completely Positive Maps,” DIMACS Graduate Research Fellowship, Spring 2002.
- F. Verstraete, Ghent University, Belgium, “Gleason-like Theorems for Entanglement and Completely Positive Maps,” DIMACS Graduate Research Fellowship, Spring 2002. (Frank is now a Professor of Physics at the University of Vienna and the University of Ghent.)
- J. M. Renes, University of New Mexico, USA, “Effect Algebras and the Quantum Probability Rule,” Summer Ph. D. Research, Summer 2001. (Joseph is now a Senior Scientist at ETH Zurich, since 2012.)
- R. A. Obajtek, Saint Louis University, USA, “Quantum Cryptography with Trinary Qutrit Alphabets,” Bell Labs Summer Research Program, Summer 2001.
- N. E. Baytch, Harvard University, USA, “Nonorthogonal Variations of Gleason’s Theorem in Quantum Mechanics,” Los Alamos National Laboratory Summer Intern Program, Summer 2000.
- P. Hayden, University of Oxford, England, “Distributing Quantum Information,” Los Alamos National Laboratory Visiting Student, April–May 2000. (Patrick is now a Professor of Physics at Stanford University.)
- R. Schumann, University of Stellenbosch, South Africa, “Quantum Information Theory,” Master’s Thesis, Spring–Summer 2000.
- T. L. Poo, University of Oxford, England, “Entanglement–Information Relations in Quantum Information Processing,” Caltech Summer Undergraduate Research Fellowship, Summer 1998.
- J. A. Cortese, California Institute of Technology, USA, “Entanglement-Enhanced Classical Communication on the Amplitude Damping Channel,” beginning Ph. D. project, Spring–Summer 1997.

External Examiner for PhD Defense:

- B. Ibinson, “Quantum Information and Entropy,” University of Bristol, England, advisor A. Winter, 24 January 2008.
- Å. Ericsson, “Exploring the Set of Quantum States,” Stockholm University, Sweden, advisor I. Bengtsson, 17 August 2007.

Professional Affiliations:

- American Physical Society (member since 2000, fellow since 2012)
- International Quantum Structures Association (member since 1997)
- Society for Phenomenology and Existential Philosophy (member since 2023)
- Society for Mind-Matter Research (member since 2018)
- William James Society (member since 2005)

Foundations and Funding Agencies Advised:

- Official Nominator, VinFuture Prize, Vietnam
- Breakthrough Prize Foundation, International
- Micius Quantum Foundation, China
- Princess of Asturias Foundation, Spain
- Department of Energy, USA
- John D. and Catherine T. MacArthur Foundation, USA
- John Simon Guggenheim Memorial Foundation, USA
- National Science Foundation, USA
- European Science Foundation, EU
- Austrian Academy of Sciences, Austria
- Science Foundation Ireland, Republic of Ireland
- Israel Science Foundation, Israel

Science and Technology Assistance Agency, Slovakia
 Canadian Institute for Advanced Research, Canada
 Netherlands Organisation for Scientific Research, Netherlands
 Fonds National Suisse de la Recherche Scientifique, Switzerland

Journals Refereed Over the Years:

American Journal of Physics; Annalen der Physik; Annals of Physics; Entropy; European Physical Journal D; Europhysics Letters; Fortschritte der Physik; Foundations of Physics; Foundations of Science; IEEE Transactions on Information Theory; International Journal of Quantum Information; International Journal of Theoretical Physics; Journal of Applied Mathematics; Journal of Mathematical Physics; Journal of Modern Optics; Journal of Optics; Journal of Physics A; Nature; New Journal of Physics; Open Systems & Information Dynamics; Physica Scripta; Physical Review A; Physical Review E; Physical Review Letters; Physics Letters A; Physics Today; Proceedings of the Royal Society A; Quantum Information and Computation; Quantum Information Processing; Reviews of Modern Physics; Studies in History and Philosophy of Modern Physics

PUBLICATIONS:

All of my publications follow an alphabetical author-ordering convention with the exception of: Articles A56, A57, and C34 from my earliest student years, A11, A12, C11, and I2 from my brief foray into private industry, and A18, A49, C15, and C17 which reported laboratory experiments.

A. Publications in Professional Journals and Trade Magazines

1. C. A. Fuchs, M. Olshanii, and M. B. Weiss, “Quantum mechanics? It’s all fun and games until someone loses an i ,” to appear in *Asian Journal of Physics* (2023). [arXiv:2206.15343](#).
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D. Books Authored

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E. Books and Special Issues Edited

1. C. A. Fuchs and A. Khrennikov, editors, Quantum Information Revolution: Impact to Foundations?, *Foundations of Physics* **50**(12), 1757–1761 (2020).
2. H. Atmanspacher and C. A. Fuchs, editors, *The Pauli-Jung Conjecture and Its Impact Today*, (Imprint Academic, Exeter, UK, 2014).
3. L. Accardi, G. Adenier, C. A. Fuchs, G. Jaeger, A. Yu. Khrennikov, J. Å. Larsson, and S. Stenholm, editors, *Foundations of Probability and Physics – 5, Växjö, Sweden, 24–27 August 2008*, AIP Conference Proceedings Vol. 1101, (American Institute of Physics, Melville, NY, 2009).
4. G. Adenier, C. A. Fuchs, and A. Yu. Khrennikov, editors, *Foundations of Probability and Physics – 4, Växjö, Sweden, 4–9 June 2006*, AIP Conference Proceedings Vol. 889, (American Institute of Physics, Melville, NY, 2007).
5. C. A. Fuchs, editor, Festschrift for Asher Peres’s 70th Birthday, *Foundations of Physics* **35**(11,12), (2005) and **36**(1), (2006).
6. J. Bub and C. A. Fuchs, editors, Special Issue on Quantum Information and Computation, *Studies in History and Philosophy of Modern Physics* **34**(3), (2003).

F. Other Book-Length Documents

1. C. A. Fuchs, *My Struggles with the Block Universe: Selected Correspondence, January 2001 – May 2011*, edited by Blake C. Stacey, foreword by Maximilian Schlosshauer (2014). 2,349 pages. `arXiv:1405.2390`.
2. C. Bennett, D. Bethune, G. Brassard, N. Donnangelo, A. Ekert, C. Elliott, J. Franson, C. Fuchs, M. Goodman, R. Hughes, P. Kwiat, A. Migdall, S. W. Nam, J. Nordholt, J. Preskill, and J. Rarity, *A Quantum Information Science and Technology Roadmap, Part 2: Quantum Cryptography, Report of the Quantum Cryptography Technology Experts Panel*, United States Advanced Research and Development Activity (ARDA), 17 July 2004. 100 pages. Available at <https://tinyurl.com/528wd8bz>.
3. C. A. Fuchs, *Distinguishability and Accessible Information in Quantum Theory*, PhD thesis, University of New Mexico, Albuquerque, NM (1996). 174 pages. `quant-ph/9601020`.

G. Professionally Produced Film or News Appearances

1. C. A. Fuchs, with S. M. Carroll, D. D. Hoffman, and M. Seguin, *Eminent Physicists on Schrödinger’s Cat*, produced by WONDROS for FQxI, 27 October 2023, <https://youtu.be/b47602pesmk>.
2. C. A. Fuchs, documentary on QBism with Hans Busstra, *The Dizzying Free Fall of QBism*, produced by the Essentia Foundation, 25 June 2023, <https://youtu.be/nSqDMtHoaT0>.
3. C. A. Fuchs, with A. Cabello, M. Giustina, and R. Schack, film noire, *Wine, Quantum, a Life Worth Living*, produced by WONDROS for FQxI, 28 March 2023, <https://youtu.be/nSqDMtHoaT0>.
4. C. A. Fuchs, video interview with James Der Derian, *Project Q – Peace & Security in a Quantum Age, Q2: Interview with Professor Christopher Fuchs*, 27 March 2015, <https://goo.gl/SYXQTX>.
5. C. A. Fuchs, segment devoted to QBism in episode titled “Is Luck Real?” of the Science Channel’s television show *Through the Wormhole with Morgan Freeman*, March 2014; video clip posted at <https://youtu.be/LQvCTZgNRNw>.

6. C. A. Fuchs, brief appearance in The History Channel's *History's Mysteries*, episode titled "True Story of the Philadelphia Experiment," originally aired 12 March 2001; video clip posted at <https://youtu.be/3S0IGwKGV6s>.
7. C. A. Fuchs, with baby Emma Jane Fuchs, interview in the aftermath of the Los Alamos, New Mexico Cerro Grande Fire, *NBC Nightly News* (14 May 2000) and NBC's *The Today Show* (15 May 2000).

H. Book Reviews, Essays, Blurbs, Interviews, Radio and Other Film Appearances, Etc.

1. C. A. Fuchs, "Praise for 'Quantum Measurement: Theory and Practice'," on back cover of *Quantum Measurement: Theory and Practice*, by A. N. Jordan and I. A. Siddiqi, (Cambridge University Press, Cambridge, UK, 2023).
2. C. A. Fuchs, interview, "If the laws of physics won't allow it, the laws of physics must be wrong: A conversation with Christopher Fuchs," *Newsletter of the Stellenbosch Institute for Advanced Study* 2023(8), 4–7 (2023).
3. C. A. Fuchs, comedy podcast, "QBism & the Truth of Probability with Dr. Chris Fuchs," with Nash Flynn and Andy Ciccone, *Tomorrow, Today Podcast*, <https://tinyurl.com/ysp3kern>, 25 July 2022.
4. C. A. Fuchs, interview, "Jede Messung kreiert etwas Neues im Universum," with Klaus Bachmann, illustrations by Katharina Gschwendtner, *GEOkompakt*, Issue 69, 80–83, December 2021. (Unfortunately retitled to "QBismus: Ist alles nur subjektiv?" in a 7 September 2023 post behind their paywall.)
5. C. A. Fuchs, "Texas Weinberg Stories," *The History of the University of Texas at Austin Department of Physics*, <https://tinyurl.com/y29p85jk> (July, 2021).
6. C. A. Fuchs, "Interview with Physicist Christopher Fuchs," with Robert P. Crease and James Sares, *Continental Philosophy Review* **54**, 541–561 (2021).
7. C. A. Fuchs and Andrei Khrennikov, "Preface to Special Issue: Quantum Information Revolution: Impact to Foundations," *Foundations of Physics* **50**(12), 1757–1761 (2020).
8. C. A. Fuchs, "Quantum Physics Is No More Mysterious Than Crossing the Street: A Conversation with Chris Fuchs," interview with Corey S. Powell, *Discover Magazine*, 29 November 2019, <https://tinyurl.com/sqwb2ul>.
9. C. A. Fuchs, "Is It Autonomy All the Way Down? The Search for a QBist Metaphysic," *STIAS Annual Report 2018*, 50–51 (November 2019).
10. C. A. Fuchs, "Back to the Future: Quantum Opinions," interview with Lisa Allen, *UMass Boston Research Magazine* **1**, 6–11 (September 2019).
11. C. A. Fuchs, "Praise for 'The Case Against Reality: Why Evolution Hid the Truth from Our Eyes'," inside cover of *The Case Against Reality: Why Evolution Hid the Truth from Our Eyes*, by Donald Hoffman, (W. W. Norton & Company, New York, 2019).
12. C. A. Fuchs, review, "What is Real? The Unfinished Quest for the Meaning of Quantum Physics. Adam Becker. 379 pp. Basic Books, New York, 2018. Price: \$32.00 (hardcover). ISBN 978-0-465-09606-0." *American Journal of Physics* **86**(12), 957–959 (2018). Posted with references as "Copenhagen Interpretation Delenda Est?," [arXiv:1809.05147](https://arxiv.org/abs/1809.05147).
13. C. A. Fuchs, "Praise for 'Geometry of Quantum States,' Second Edition," (with G. J. Milburn) on back cover of *Geometry of Quantum States: An Introduction to Quantum Entanglement*, second edition, by I. Bengtsson and K. Życzkowski, (Cambridge University Press, Cambridge, UK, 2017).
14. C. A. Fuchs, "Praise for 'QBism: The Future of Quantum Physics'," (with J. Trefl) on back cover of *QBism: The Future of Quantum Physics*, by H. C. von Baeyer, (Harvard University Press, Cambridge, MA, 2016).
15. C. A. Fuchs, "Quantum Worlds," radio interview, *The Philosopher's Zone*, presented by Joe Gelonesi (ABC Radio National, Australian Broadcasting Company), broadcast 20 September 2015, <https://tinyurl.com/2p8kuykt>.
16. C. A. Fuchs, interview, "A Private View of Quantum Reality," with Amanda Gefter, *Quanta Magazine*, 4 June 2015, <https://tinyurl.com/ys7mykk8>. Reprinted at *Wired*, 14 June 2015, <https://tinyurl.com/ypxekduw>.

17. C. A. Fuchs, “How We Revived Our House’s Paint Scheme,” *Old House Journal*, 26 July 2013, <https://tinyurl.com/yxe5yfdz>.
18. C. A. Fuchs, “March Meeting in the Lone Star State,” *The Quantum Times* **5**(3), 1–2 (2011).
19. C. A. Fuchs, “Letter from the Incoming Chair,” *The Quantum Times* **5**(3), 1–2 (2011).
20. C. A. Fuchs, “Praise for ‘Quantum Computation and Quantum Information,’” (with S. Aaronson, R. Blatt, D. P. DiVincenzo, and L. Grover) on back cover of *Quantum Computation and Quantum Information, 10th Anniversary Edition*, by M. A. Nielsen and I. L. Chuang, (Cambridge University Press, Cambridge, UK, 2010).
21. C. A. Fuchs, radio interview, *The Science Show* presented by Robyn Williams (ABC Radio National, Australian Broadcasting Company), 10 April 2010, <http://www.abc.net.au/radionational/programs/scienceshow/>.
22. C. A. Fuchs, “QBism House Opens for Business,” *Inside the Perimeter* **7**(9), 7 (2009).
23. C. A. Fuchs, “Advance Praise for ‘Q-PSI,’” (with M. A. Nielsen, J. Preskill, and W. K. Wootters) on back cover of *Quantum Processes, Systems, and Information*, by B. Schumacher and M. Westmoreland, (Cambridge University Press, Cambridge, UK, 2010).
24. C. A. Fuchs, video interview, *Meet a Scientist* series, <http://pirsa.org/09100214/>, (2009).
25. C. A. Fuchs, brief appearance in *The Challenge of Quantum Reality*, Perimeter Explorations 02, (2009).
26. C. A. Fuchs and J.-Å. Larsson, “Foreword: Unperformed Experiments Have No Results,” in *Foundations of Probability and Physics – 5*, edited by L. Accardi et al., AIP Conference Proceedings Vol. 1101, (American Institute of Physics, Melville, NY, 2009), pp. 221–222.
27. C. A. Fuchs, “Seeking SICs: An Intense Workshop on Quantum Frames and Designs,” *Inside the Perimeter* **6**(10), 5 (2008).
28. C. A. Fuchs, “Osamu Hirota: A True Quantum Communications Channel,” *Inside the Perimeter* **6**(8), 6 (2008).
29. C. A. Fuchs, “Swedish Bayesian Team,” in *Foundations of Probability and Physics – 4*, edited by G. Adenier, C. A. Fuchs, and A. Yu. Khrennikov, AIP Conference Proceedings Vol. 889, (American Institute of Physics, Melville, NY, 2007), pp. xi–xii.
30. C. A. Fuchs, “Asher Peres,” *Foundations of Physics* **35**(11), 1785–1786 (2005).
31. M. Arndt, M. Aspelmeyer, H. J. Bernstein, R. Bertlmann, C. Brukner, J. P. Dowling, J. Eisert, A. Ekert, C. A. Fuchs, D. M. Greenberger, M. A. Horne, T. Jennewein, P. G. Kwiat, N. D. Mermin, J.-W. Pan, E. M. Rasel, H. Rauch, T. G. Rudolph, C. Salomon, A. V. Sergienko, J. Schmiedmayer, C. Simon, V. Vedral, P. Walther, G. Weihs, P. Zoller, M. Zukowski, “Quantum Physics from A to Z,” in *Proceedings of the Quantum Physics of Nature (QUPON) Conference, Vienna, Austria, May 22nd-26th, 2005*, edited by M. Arndt and G. Weihs. [arXiv:quant-ph/0505187v4](https://arxiv.org/abs/quant-ph/0505187v4).
32. C. A. Fuchs, “Advance Praise for ‘Converging Realities,’” (with R. Torretti) on back cover of *Converging Realities: Toward a Common Philosophy of Physics and Mathematics*, by R. Omnès, (Princeton University Press, Princeton, 2005).
33. C. Fuchs, “Soul-Searching at Caltech,” *Physics World* (November, 2003), p. 49.
34. C. A. Fuchs, “Book Review on ‘Statistical Structure of Quantum Theory,’ by Alexander S. Holevo,” *Quantum Information and Computation* **3**(2), 191–192 (2003).
35. J. Bub and C. A. Fuchs, “Introduction: Special Issue on Quantum Information and Computation,” *Studies in History and Philosophy of Modern Physics* **34**(3), 339–341 (2003).

I. Published Abstracts

1. C. A. Fuchs, J. B. DeBroda, R. Schack, “Quantum Dynamics Is When Nothing Happens,” *APS March Meeting 2024*, Z53.00002 (2024).
2. J. B. DeBroda, C. A. Fuchs, and B. C. Stacey, “Symmetric Informationally Complete Measurements Identify the Essential Difference between Classical and Quantum,” *American Mathematical Society Spring Eastern Sectional Meeting*, <https://tinyurl.com/yutwmt9d>, (2018).

3. S. Guha, H. Krovi, C. A. Fuchs, Z. Dutton, W. Tittel, J. A. Slater, C. Simon, and W. Tittel, “Exact Analysis and Numerical Evaluation of QKD over a Practical Repeater Chain,” *QCrypt 2015: 5th International Conference on Quantum Cryptography*, http://2015.qcrypt.net/wp-content/uploads/2015/09/Contributed15_Hari-Krovi.pdf, (2015).
4. C. A. Fuchs, D. M. Appleby, and H. Zhu, “Finding a New Home for Quantum States,” *APS March Meeting 2015*, B38.004 (2015).
5. C. Fuchs, “A New Alphabet for Quantum Information,” *The Rochester Conferences on Coherence and Quantum Optics and Quantum Information and Measurement: OSA Technical Digest (online)*, <https://doi.org/10.1364/QIM.2013.W4B.3>, paper W4B.3, (2013).
6. D. M. Appleby, H. B. Dang, and C. A. Fuchs, “SIC-POVMs and Lie Algebras,” *Bulletin of the American Physical Society* **57**(1), J29 (2012).
7. H. B. Dang, D. M. Appleby, I. Bengtsson, K. Blanchfield, Å. Ericsson, C. A. Fuchs, M. A. Graydon, and G. N. Tabia, “A Linear Dependency Structure Arising from Weyl-Heisenberg Symmetry,” *Bulletin of the American Physical Society* **56**(1), J29.006 (2011).
8. H. B. Dang, D. M. Appleby, and C. A. Fuchs, “Symmetric Informationally-Complete States Are Minimum Uncertainty States in Prime Dimensions,” *Bulletin of the American Physical Society* **55**(2), Y33 (2010).
9. C. Fuchs, “Quantum Bayesian Coherence,” *Bulletin of the American Physical Society* **55**(2), X33 (2010).
10. C. A. Fuchs, D. M. Appleby, and H. B. Dang, “Quasi-Orthonormal Bases for the Space of Density Operators,” *Bulletin of the American Physical Society* **52**(1), B33.00004 (2007).
11. C. Fuchs, “Quantum Mechanics in Terms of Symmetric Measurements,” *Bulletin of the American Physical Society* **51**(1), D40.00002 (2006).
12. G. Brassard and C. A. Fuchs, “Quantum Foundations in the Light of Quantum Cryptography,” in *Quantum Physics of Nature. Theory, Experiment and Interpretation. In Collaboration with the 6th European QIPC Workshop*, in International Nuclear Information System (INIS) Repository, <https://tinyurl.com/2p8zeuww>, (2005).
13. C. A. Fuchs, “The Fragility and Resilience of Quantum Information,” *Bulletin of the American Physical Society* **44**(10), AA.02 (1999).
14. M. Ban, C. A. Fuchs, O. Hirota, M. Osaki, and M. Sasaki, “Some Problems in Quantum Channel Capacity for Shannon Information,” in *Quantum Algorithms: Dagstuhl Seminar Report 210*, edited by T. Beth and G. Brassard (Internationales Begegnungs- und Forschungszentrum für Informatik (IBFI), Wadern, Germany, 1998), p. 19.

J. Further Archived (but Unpublished) Materials

1. C. A. Fuchs and B. C. Stacey, “QBians Do Not Exist,” [arXiv:2012.14375](https://arxiv.org/abs/2012.14375).
2. C. A. Fuchs, “QBism, the Perimeter of Quantum Bayesianism,” [arXiv:1003.5209](https://arxiv.org/abs/1003.5209). This unpublished paper counts as the first real statement of QBism over the earlier Quantum Bayesianism of Caves, Fuchs, and Schack. ≥ 300 citations on Google Scholar.
3. C. A. Fuchs and R. Schack, “Quantum-Bayesian Coherence,” [arXiv:0906.2187](https://arxiv.org/abs/0906.2187). This is the paper that introduced the term “QBism.” It is a longer, more philosophical version of the later, “Quantum-Bayesian Coherence,” *Rev. Mod. Phys.* **85**(4), 1693–1715 (2013).
4. H. Barnum, C. A. Fuchs, J. M. Renes, and A. Wilce, “Influence-Free States on Compound Quantum Systems,” [arXiv:quant-ph/0507108](https://arxiv.org/abs/quant-ph/0507108). ≥ 30 citations on Google Scholar.
5. C. A. Fuchs, *Quantum States: What the Hell Are They?* (2002), 229 pages, available at <http://www.physics.umb.edu/Research/QBism/>.
6. C. A. Fuchs, “The Structure of Quantum Information” (1998), available at <http://www.physics.umb.edu/Research/QBism/>.
7. C. A. Fuchs, “578 References for Research in Quantum Distinguishability and State Disturbance” (1996), available at <http://www.physics.umb.edu/Research/QBism/>.

K. Articles Submitted or in Preparation

(Preliminary drafts available upon request.)

1. C. A. Fuchs, *The Birth of QBism*, edited by B. C. Stacey, with foreword by H. C. von Baeyer, estimated 500-page book, under contract with *Routledge*.
2. J. B. DeBroda, C. A. Fuchs, and R. Schack, “Quantum Dynamics Happens Only on Paper: QBism’s Account of Decoherence,” to be submitted to *Foundations of Physics*. [arXiv:2312.14112](https://arxiv.org/abs/2312.14112).
3. C. A. Fuchs and R. Schack, “QBism’s Account of Wigner’s Friend (and the friend’s account of Wigner),” to be submitted to *Reviews of Modern Physics*.
4. C. A. Fuchs, “The Activating Observer: Resource Material for a Paulian–Wheelerish Conception of Nature,” presently 194 pages, to be submitted somewhere as a monograph.

INVITED LECTURES AND SEMINARS:

To date, I have given over 300 invited lectures and seminars. Beyond traveling through or over most states of the United States (and over the North Pole even), this has allowed me to visit a number of places in the world. These include: Argentina (Buenos Aires), Australia (Brisbane, Sydney), Austria (Graz, Innsbruck, Obergurgl, Salzburg, Traunkirchen, Vienna), Belgium (Brussels), Canada (Banff, Calgary, Guelph, Hamilton, Kitchener, London, Montréal, Niagara, Stratford, Toronto, Vancouver, Waterloo), China (Beijing, Shenzhen), Denmark (Aarhus, Copenhagen), England (Bristol, Cambridge, Egham, Hull, Huntsham, London, Nottingham, Oxford, Plymouth, Southampton, Stonehenge, York), Finland (Helsinki), France (Cessy, La Celle-Saint-Cloud, Nice, Paris, Tourtour, Versailles), Germany (Berchtesgaden, Dagstuhl, Frankfurt, Freiburg, Garching, Günzburg, Konstanz, Mainz, Munich, Siegen, Tübingen, Ulm), Greece (Athens, Mykonos), Hong Kong (Hong Kong), Hungary (Budapest), Iceland (Grindavik, Keflavik, Reykjavik), India (Agra, Bagdogra, Delhi), Ireland (Cork, Dublin, Wexford), Israel (Haifa, Jerusalem, Nazareth, Tel Aviv), Italy (Bertinoro, Bologna, Capri, Ischia, Milan, Naples, Pavia, Pisa, Rome, Turin, Varenna), Japan (Fuji-Hakone, Nagoya, Oiso, Okinawa, Sendai, Tokyo, Yokohama), Liechtenstein (Vaduz), Mexico (Acapulco), Netherlands (Amsterdam, Utrecht), New Zealand (Auckland), Northern Ireland (Belfast), Norway (Oslo), Poland (Warsaw, Wrocław), Portugal (Lisbon), Scotland (Aberdeen, Edinburgh, Glasgow), Sikkim (Gangtok), Slovakia (Bratislava), South Africa (Cape of Good Hope, Cape Town, Muizenberg, Paarl, Stellenbosch), Spain (Barcelona, Benasque, Madrid, Oviedo), Sweden (Linköping, Malmö, Stockholm, Växjö), Switzerland (Amden, Bern, Filzbach, Geneva, Interlaken, Trogen, Zürich), and Wales (Bangor, Cardiff, Hay-on-Wye, Swansea). (*I compile this list in tribute to my stepfather William T. ‘Red’ Spears, who would say, “Chris, travel is the best form of education.”*)

A. Expository, Tutorial, and Summer-School Talks

- CU-Prime’s 1st Annual Physics Debate: What Happens When We Measure?, 27 January 2023, Graeme Smith opponent, University of Colorado Boulder, <https://youtu.be/gNcj3065pKo>.
- Coding and the New Human Phenotype: Is the Universe a Metaverse?, 16 October 2022, roundtable discussion with Emily Adlam, David Chalmers, Elias Dakwar, and Sylvester James Gates, New York Psychoanalytic Society & Institute, <https://youtu.be/gw2GjssUafs>.
- Munich Quantum Stammtisch: Is the Moon There When Nobody Looks?, 17 March 2021, panel discussion with Alexia Auffèves, Časlav Brukner, Ignacio Cirac (host), Leah Henderson, Robert Spekkens, and Anton Zeilinger, <https://youtu.be/CDqZn-DNL3o>.
- History for Physics: Quantum Foundations, University of Vienna, Austria, 23 September 2019, “Two Tales from the Quantum Information Closet,” <https://youtu.be/jyPwQ99o94c>.
- Fellows’ Seminar, Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa, 5 June 2018, “QBism, Quantum Bettabilitarianism.”
- Lecture Series on Foundations of Science: Scientific Realism, University of Vienna, Austria, 17 May 2018, “QBism, or Bettabilitarianism for a World Teeming with Novelty.”

Boston QuarkNet Center Winter Meeting, The Roxbury Latin School, West Roxbury, Massachusetts, 8 February 2018, “Elements of a QBist Formulation of Quantum Theory.”

Fellows’ Seminar, Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa, 1 June 2017, “QBism: From the Modern Quantum Mysteries to Early American Pragmatism.”

Public Lecture, Quantum ICT Research Institute, Tamagawa University, Tokyo, Japan, 12 March 2017, “QBism: From the Q to the B!”

International School of Physics “Enrico Fermi”, Course 197 – Foundations of Quantum Physics, Varenna, Italy, 8–13 July 2016.

Quantum Metaphysics Panel, with Alexa Meade and John Philip Santos, moderated by Jairus Grove, Q3 Symposium: Moment, Matter, Mind and Metaphysics, Quarantine Station, Sydney, Australia, 13 February 2016, <https://goo.gl/jXKMN8>.

Scientific Development Program Seminar Series, Raytheon BBN Technologies, Cambridge, MA, 8 October 2013, “Repainting Quantum Theory in a QBist Style.”

Fellows’ Seminar, Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa, 12 April 2012, “How Quantum Theory Changes the Way We Think of the World.”

Asher Peres International School for Theoretical Physics, Chowder Bay, Sydney, Australia, 17–21 November 2008, “Quantum Foundations, Asher Peres Style.”

“The Physics of Information: What the Universe Doesn’t Want You to Know,” a panel discussion with Sir Anthony Leggett, Seth Lloyd, and Leonard Susskind. Perimeter Institute Public Lecture, 17 December 2007, with 605 people attending; aired on CBC Radio 1 as an episode of *Quirks and Quarks with Bob McDonald*, 5 January 2008, approximate number of listeners 500,000; current count of YouTube views 84K, <https://youtu.be/3S0IGwKGV6s>.

Quantum Foundations Summer School, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 27–31 August 2007, “Quantum States as Uncertainty, pure and simple. But, Uncertainty about What?” Available for viewing at <http://pirsa.org/>.

Squire Public Lecture, Grinnell College, Grinnell, Iowa, 3 May 2006, “Quantum Information and the Reactive World.”

Computing Beyond Silicon Summer School 2004, California Institute of Technology, Pasadena, California, 16–18 June 2004, “Introduction to Quantum Mechanics” and “Quantum Cryptography.”

Instructional Course in Quantum Computing, Edinburgh, Scotland, 27–31 March 2000, course on “Quantum Communication.”

TMR Network School on Quantum Computation and Quantum Information Theory, Villa Gualino, Turin, Italy, 12–23 July 1999, course on “Quantum Channels.”

Physics Colloquium, Amherst College, Amherst, Massachusetts, 2 April 1999, “Quantum Teleportation: Using Entanglement as a Resource.”

Physics Colloquium, Case Western Reserve University, Cleveland, Ohio, 5 February 1998, “Quantum Entanglement: What Good Is It?”

Michelson Lecture Series, Case Western Reserve University, Cleveland, Ohio, 2–6 February 1998, lectures on “Quantum Information Theory.”

DIMACS Quantum Computing Tutorial and Workshop, Princeton University, Princeton, New Jersey, 11–15 August 1997, tutorials on “Basic Quantum Mechanics” and “Sending Classical Information on Quantum Channels.”

B. Invited Research Talks

Centenary of Quantum Mechanics, Helgoland, Germany, 9–14 June 2025 (scheduled).

Quantum Information and Probability: from Foundations to Engineering (QIP24), Linnaeus University, Växjö, Sweden, 11–14 June 2024 (scheduled).

Stanford Q-FARM Seminar, Stanford University, Stanford, California, 10 January 2024.

The 61st Meeting of the Society for Phenomenology and Existential Philosophy (SPEP 61), Toronto Metropolitan University, Toronto, Canada, 12 October 2023.

From GHZ to Tic Tac Toe: A Symposium To Celebrate Danny Greenberger's 90th Birthday, University of Vienna, Austria, 29 September 2023.

US-Ukraine Quantum Forum 2023, Tulane University, New Orleans, Louisiana and V. N. Karazin National University, Kharkiv, Ukraine, 31 August 2023 (over Zoom).

Quantum Social Science Bootcamp '23, Ohio State University, Columbus, Ohio, 17 July 2023 (over Zoom).

Wykeham Professorship Group Meeting, Oxford University, Oxford, United Kingdom, 23 June 2023 (over Zoom).

Séminaire de Philosophie des Sciences, Académie Française, Paris, France, 24 April 2023.

Seminar, FQxI Lecture Series on Quantum Foundations 22/23, Universität Siegen, Siegen, Germany, 13 April 2023.

Seminar, FQxI Lecture Series on Quantum Foundations 22/23, Universität Siegen, Siegen, Germany, 11 April 2023.

Seminar, Center for Quantum Information and Control (CQuIC), University of New Mexico, Albuquerque, New Mexico, 22 March 2023.

Seminar, Center for Quantum Information and Control (CQuIC), University of New Mexico, Albuquerque, New Mexico, 8 March 2023.

QuEn 2023: QBism/Enactivism with Chris Fuchs, Ezequiel Di Paolo and Hanne De Jaegher, 15 February 2023 (over Zoom).

International Conference on Quantum Computing and Communications (QCC-2023), Baba Farid College, Bathinda, Punjab, India, 10 February 2023 (over Zoom).

Research Visit, Institute for Quantum Optics and Quantum Information (IQOQI), University of Vienna, Vienna, Austria, 13–21 December 2022.

Wigner's Friends: Theory Workshop, The Institute, Salesforce Tower, San Francisco, California, 2 December 2022.

Cavendish Quantum Information Seminar, Cavendish Laboratory, University of Cambridge, England, 4 November 2022 (over Zoom).

Physics Colloquium, Tulane University, New Orleans, Louisiana, 12 September 2022.

Measurement-Based Quantum Computation, Learning, and Agency, Obergurgl, Austria, 30 August 2022.

Quantum Information and Quantum Technology – 2022 (QIQT-2022), Indian Institute of Science Education and Research Kolkata, Kolkata, India, 27 June 2022 (over Zoom), https://youtu.be/s_HRQNxjJyc.

Mind and Matter 2022, University of Helsinki, Helsinki, Finland, 16 June 2022.

QBism and Phenomenology, Compared and Contrasted, Linköping, Sweden, 8 June 2022.

Mind and Agency in the Foundations of Quantum Physics, Institute for Quantum Studies, Chapman University, Orange, California, 1 June 2022.

Seminar, Philosophical Issues in Quantum Physics, California Institute of Technology, Pasadena, California, 19 April 2022 (over Zoom).

Buddhism, Physics, and Philosophy Redux, University of California, Berkeley, 1 April 2022.

UT Austin Weekly Quantum Information Group Meeting, University of Texas at Austin, 21 February 2022 (over Zoom).

Physics Colloquium, University of Rochester, Rochester, New York, 7 February 2022.

51st Winter Colloquium on the Physics of Quantum Electronics, Snowbird, Utah, 12 January 2022.

Invited Panelist, Golden Webinar in Astrophysics: From Entangled Quantum Puzzles to Quantum Information, Pontificia Universidad Católica de Chile, Santiago, Chile, 19 November 2021 (over Zoom).

Vienna Quantum Foundations Conference, Vienna, Austria, 9 September 2021, (over Zoom), <https://youtu.be/dmgGLNuVYJA>.

Harvard Mini-Workshop on QBism and the Interpretation of Quantum Theory, Cambridge, Massachusetts, 25 May 2021, <https://youtu.be/I2w-BtIO1sA>.

Seminar, EPS Young Minds UCLouvain, Louvain, Belgium, 25 May 2021 (over Zoom).

Seminar, Philosophical Issues in Quantum Physics, California Institute of Technology, Pasadena, California, 20 April 2021 (over Zoom).

Quantum Limits of Knowledge II, Université Grenoble Alpes, Grenoble, France, 31 March 2021, (over Zoom), <https://youtu.be/deqmTt8Imug?t=803>.

Charles H. Bennett Festival (Charliefest 2020), IBM Research, Yorktown Heights, New York, 25 June 2020 (over Zoom).

Physics Colloquium, Simon Fraser University, Vancouver, Canada, 16 January 2020.

Plenary Talk, The Science of Consciousness 2019, Interlaken, Switzerland, 26 June 2019.

Panelist and Speaker, The Eighth Integrated East-West Forum, Interlaken, Switzerland, 25 June 2019.

Quantum Limits of Knowledge, Niels Bohr Institute, Copenhagen, Denmark, 19 June 2019.

Quantum Information Revolution: Impact to Foundations!? (QIR), Linnaeus University, Växjö, Sweden, 12 June 2019.

The Blind Spot: Experience, Science, and the Search for ‘Truth’, Dartmouth College, Hanover, New Hampshire, 22 April 2019.

Subjectivistic Interpretations of Quantum Probabilities, École Normale Supérieure, Paris, France, 13 March 2019.

Physics Department Invited Talk, Southern University of Science and Technology (SUSTech), Shenzhen, China, 2 May 2018.

C3QS: Coherent Control of Complex Quantum Systems, Okinawa Institute of Science and Technology, Onna Village, Okinawa, Japan, 20 April 2018.

Physics Colloquium, University of Massachusetts Boston, 22 February 2018.

Physics Colloquium, University of Rochester, Rochester, New York, 14 February 2018.

Hong Kong Workshop on Quantum Information and Foundations: Focus on Physics of the Observer, Hong Kong, 8 January 2018.

Mind, Matter and the New Real, Esalen Institute, Big Sur, California, 6 December 2017.

Physics Colloquium, Tufts University, Medford, Massachusetts, 1 December 2017.

Physics Colloquium, University of Massachusetts Lowell, 25 October 2017.

Solstice of Foundations: Workshop on Contextuality, ETH, Zürich, Switzerland, 23 June 2017.

Workshop on Participatory Realism, Stellenbosch Institute for Advanced Study, Stellenbosch, South Africa, 6 June 2017.

Seminar, Harvard-Smithsonian Center for Astrophysics, Cambridge, Massachusetts, 18 May 2017.

Seminar, Quantum ICT Research Institute, Tamagawa University, Tokyo, Japan, 13 March 2017.

Physics Colloquium, Kenyon College, Gambier, Ohio, 9 December 2016.

Computer Science Seminar, Oxford University, Oxford, England, 25 November 2016.

Pioneers in Quantum Optics and Quantum Information Science, Albuquerque, New Mexico, 14 October 2016.

Agency and (quantum) Physics, Konstanz, Germany, 22 September 2016.

Seminar, Quantum Information Theory Group, University of Pavia, Pavia, Italy, 5 July 2016.

Quantum and Beyond (QB), Linnaeus University, Växjö, Sweden, 14 June 2016.

Physics Colloquium, Boston College, Chestnut Hill, Massachusetts, 20 April 2016.

Q3 Symposium: Moment, Matter, Mind and Metaphysics, Quarantine Station, Sydney, Australia, 13 February 2016.

The Emergence of Quantum Information: A Conference in Honour of Gilles Brassard, Bromont, Canada, 2 November 2015.

Colloquium, Applied Research Laboratories, Austin, Texas, 12 August 2015.

Theoretical Physics Seminar, University of Texas at Austin, 11 August 2015.

Conference on Time, Identity, and Future, Blue Lagoon, Grindavik, Iceland, 8 July 2015.

Antinomies Quantiques et Réalité, Fondation des Treilles, Tourtour, France, 2 June 2015.

International Workshop: What is Quantum Information?, Buenos Aires, Argentina, 19 May 2015.

Physics Colloquium, Michigan State University, East Lansing, Michigan, 30 April 2015.

New Directions in the Foundations of Physics, Mathematical Association of America Carriage House, Washington, DC, 24 April 2015.

Physics Colloquium, University of North Carolina, Chapel Hill, North Carolina, 13 April 2015.

Q2 Symposium: The Space-Time of War and Diplomacy, Quarantine Station, Sydney, Australia, 27 March 2015.

Colloquium, Munich Center for Mathematical Philosophy, Ludwig Maximilian University, Munich, Germany, 20 November 2014.

Seminar, Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia, 19 November 2014.

ITS-ETH Workshop on Quantum Foundations, Zürich, Switzerland, 16 October 2014.

Research Seminar, Naval Research Laboratory, Washington, DC, 22 July 2014.

Physics Colloquium, University of Massachusetts Boston, 11 April 2014.

The 2nd Princeton Workshop on Classical, Semi-classical and Quantum Noise, Princeton University, 22 March 2014.

Physics Colloquium, City College of New York, New York, 24 February 2014.

Colloquium, Max Planck Institute for Quantum Optics, Garching, Germany, 11 February 2014.

44th Winter Colloquium on the Physics of Quantum Electronics, Snowbird, Utah, 6 January 2014.

7th Workshop on Control of Quantum Correlations in Tailored Matter: Common Perspectives of Mesoscopic Systems and Quantum Gases, Schloss Reisenberg, Günzburg, Germany, 28 October 2013.

Quantum Theory: Advances and Problems – QTAP, Linnaeus University, Växjö, Sweden, 10 June 2013.

Joint Philosophy-Physics Colloquium, University of Queensland, Brisbane, Australia, 9 November 2012.

European Science Foundation Programme “The Philosophy of Science in a European Perspective” Final Conference, Bertinoro, Italy, 20 October 2012. (Ha! I was invited as one of the “three senior philosophers of physics / natural sciences” to present at the meeting!)

Symposium on Foundations of Quantum Mechanics, Joint Quantum Institute, University of Maryland and National Institute of Standards and Technology (NIST), College Park, Maryland, 10 October 2012.

Colloquium, Institute for Quantum Computing, University of Waterloo, Waterloo, Canada, 10 September 2012.

2012 Karles Invitational Conference: Quantum Information Science and Technology, Naval Research Laboratory, Washington, DC, 27 August 2012.

Quantum Information Seminar, MIT Lincoln Laboratory, Lexington, Massachusetts, 23 July 2012.

Physics and Applied Physics Departments Colloquium, Stanford University, Stanford, California, 22 May 2012.

National Institute for Theoretical Physics (NITheP) Seminar, Stellenbosch, South Africa, 18 April 2012.

Physics Department Colloquium, Dartmouth College, Hanover, New Hampshire, 11 November 2011.

Foundations of Quantum Theory: Measurement, the Quantum to Classical Transition, and the Flow of Time, Stellenbosch, South Africa, 26 October 2011.

Physics Department Colloquium, Michigan Technological University, Houghton, Michigan, 22 September 2011.

Colloquium, Joint Quantum Institute, University of Maryland and National Institute of Standards and Technology (NIST), College Park, Maryland, 14 September 2011.

Quantum Physics and the Nature of Reality, International Academy, Traunkirchen, Austria, 4 July 2011.

Quantum States: Ontic or Epistemic?, University of Aberdeen, Aberdeen, Scotland, 26 June 2011.

Foundations of Probability and Physics – 6, Linnaeus University, Växjö, Sweden, 14 June 2011.

Conceptual Foundations and Foils for Quantum Information Processing, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 10 May 2011.

Difficult Problems in Quantum Information Theory II, Massachusetts Institute of Technology, Cambridge, Massachusetts, 3 May 2011.

Clifford Lectures, Tulane University, New Orleans, Louisiana, 14–17 March 2011.

Itamar Pitowsky Memorial Lecture, Hebrew University, Jerusalem, Israel, 16 February 2011.

Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa, 2–11 November 2010.

NORDITA Workshop on the Foundations of Quantum Mechanics, Stockholm, Sweden, 27 September – 1 October 2010.

Quantum Physics in Higher-Dimensional Hilbert Spaces, International Academy, Traunkirchen, Austria, 29 July 2010.

Tenth International Conference on Quantum Communication, Measurement and Computation (QCMC 2010), University of Queensland, Brisbane, Australia, 20 July 2010.

Advances in Quantum Theory, Linnaeus University, Växjö, Sweden, 14 June 2010.

Fundamentals of Physics and Information, ETH, Zürich, Switzerland, 11 June 2010.

Physics Colloquium, University of North Carolina, Chapel Hill, North Carolina, 20 April 2010.

Colloquium, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 10 March 2010.

Nagoya Winter Workshop on Quantum Information, Measurement, and Foundations, Nagoya, Japan, 20 February 2010.

IQOQI Seminar, University of Vienna, Vienna, Austria, 18 January 2010.

Philosophy of Science Seminar, University of Toronto, Toronto, Canada, 29 October 2009.

Physics Department Colloquium, University of Guelph, Guelph, Canada, 20 October 2009.

Second Annual Workshop on Informatic Phenomena, Tulane University, New Orleans, Louisiana, 8 October 2009.

Conference on Quantum Information & Quantum Control III (CQIQC-III), Fields Institute for Research in Mathematical Sciences, Toronto, Canada, 25 August 2009.

Reconstructing Quantum Theory, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 13 August 2009.

Quantum Theory: Reconsideration of Foundations – 5, Växjö, Sweden, 17 June 2009.

Philosophy of Science Colloquium, University of Western Ontario, London, Canada, 20 May 2009.

Joint Physics and Philosophy Colloquium, University of Rochester, Rochester, New York, 25 March 2009.

Workshop on Informatic Phenomena, Tulane University, New Orleans, Louisiana, 16 October 2008.

Seminar, Inst. für Grenzgebiete der Psychologie und Psychohygiene, Freiburg, Germany, 30 July 2008.

Seminar, Max Planck Institute for Quantum Optics, Garching, Germany, 28 July 2008.

Perspectives in Physics and Philosophy, Carré des Sciences, Paris, France, 19 June 2008.

Information Primitives and the Laws of Nature, ETH, Zürich, Switzerland, 15 May 2008.

Physics Colloquium, McMaster University, Hamilton, Ontario, Canada, 9 April 2008.

Physics Colloquium, University of Oregon, Eugene, Oregon, 28 February 2008.
 PIAF Workshop in Quantum Foundations, Sydney, Australia, 3 February 2008.
 Mathematics Seminar, University of Bristol, England, 25 January 2008.
 Colloquium, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 16 January 2008.
 Computer Science Seminar, Tsinghua University, Beijing, China, 7 November 2007.
 Many Worlds at 50, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 24 August 2007.
 Workshop on Operational Probabilistic Theories as Foils to Quantum Theory, University of Cambridge, England, 11 July 2007.
 Vienna Symposium on the Foundations of Modern Physics, Vienna, Austria, 9 June 2007.
 Mathematics Seminar, Susquehanna University, Selinsgrove, Pennsylvania, 21 March 2007.
 Pragmatisme et Mécanique Quantique, École Polytechnique, Paris, France, 23 February 2007.
 Physics Colloquium, State University of New York, Albany, New York, 10 November 2006.
 Quantum Reality, Relativistic Causality, and Closing the Epistemic Circle: An International Conference, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 22 July 2006.
 Workshop on Quantum Mechanics: Axiomatics of Measurements and Connections with Computing and Information Retrieval, University of Pavia, Pavia, Italy, 25 June 2006.
 Quantum Computation and Information Seminar, Center for Logic and Computation, Technical University of Lisbon, Lisbon, Portugal, 31 March 2006.
 Applied Mathematics Colloquium, Princeton University, Princeton, New Jersey, 20 February 2006.
 36th Winter Colloquium on The Physics of Quantum Electronics, Snowbird, Utah, 5 January 2006.
 Physics Colloquium, College of William and Mary, Williamsburg, Virginia, 28 October 2005.
 Physics Colloquium, Dartmouth College, Hanover, New Hampshire, 30 September 2005.
 Twenty-Fifth International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering, San Jose, California, 11 August 2005.
 Quantum Information, Computation and Logic: Exploring New Connections, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 19 July 2005.
 J. T. Lewis Memorial Conference on Mathematics and Applications, Dublin, Ireland, 13 June 2005.
 Quantum Theory: Reconsideration of Foundations – 3, Växjö, Sweden, 4 June 2005.
 Quantum Physics of Nature & The 6th European Quantum Information Processing and Communication (QIPC) Workshop, Vienna, Austria, 23 May 2005.
 AMO Physics Seminar, University of Toronto, Toronto, Canada, 5 April 2005.
 II Symposjum LFPPI Informatyki I Inżynierii Kwantowej, Wrocław University of Technology, Wrocław, Poland, 4 March 2005.
 Philosophy of Science Seminar, University of Maryland, College Park, Maryland, 16 December 2004.
 Quantum Physics Seminar, New York University, New York, New York, 13 December 2004.
 Summer Workshop: Time-Asymmetry and Quantum Reality, Sydney, Australia, 4 December 2004.
 Philosophy of Science Association Annual Meeting, Austin, Texas, 20 November 2004.
 Quantum Physics Seminar, New York University, New York, New York, 15 November 2004.
 Seven Pines Symposium VIII: Quantum Mechanics, Quantum Information, and Quantum Computation, Minneapolis, Minnesota, 7 May 2004.
 New Directions in the Foundations of Physics, American Institute of Physics, College Park, Maryland, 30 April 2004.
 Seminar, Institut für Grenzgebiete der Psychologie und Psychohygiene, Freiburg, Germany, 1 April 2004.
 Physics Colloquium, University of British Columbia, Vancouver, Canada, 11 March 2004.

Physics Colloquium, National University of Ireland, Maynooth, Ireland, 5 March 2004.
 Philosophy of Physics Research Seminar, Oxford University, Oxford, England, 19 February 2004.
 Probability in Quantum Mechanics, London School of Economics, London, England, 16 February 2004.
 AMO Physics Seminar, Niels Bohr Institute for Astronomy, Physics, and Geophysics, University of Copenhagen, Copenhagen, Denmark, 2 February 2004.
 Seminaire du Constitutions d'Objectivite, Centre de Recherches en Epistémologie Appliqué, Paris, France, 8 December 2003.
 European Science Foundation Conference on Philosophical and Foundational Issues in Statistical Physics, Utrecht, Netherlands, 30 November 2003.
 Physics Colloquium, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 19 November 2003.
 Institute for Quantum Information Seminar Series, California Institute of Technology, Pasadena, California, 15 October 2003.
 Workshop on Quantum Measurements and Quantum Stochastics, University of Aarhus, Aarhus, Denmark, 7 August 2003.
 Dublin Theoretical Physics Colloquium, Trinity College, Dublin, Ireland, 6 October 2003.
 Mathematical Analysis of Quantum Systems, Dublin Institute for Advanced Studies, Dublin, Ireland, 2 October 2003.
 Mathematics Seminar, University of York, York, England, 22 July 2003.
 Quantum Theory: Reconsideration of Foundations II, Växjö University, Växjö, Sweden, 1 June 2003.
 Quantum Mechanics On The Large Scale Exploratory Workshop, Peter Wall Institute of Advanced Studies, University of British Columbia, Vancouver, Canada, 21 April 2003.
 Communication Networks Research Institute, Dublin Institute of Technology, Dublin, Ireland, 27 March 2003.
 Physics Colloquium, City College of New York, New York, 4 December 2002.
 Workshop on Quantum Foundations in the Light of Quantum Information II, Université de Montréal, Montréal, Canada, 15 November 2002.
 University of Copenhagen Mathematics Department Seminar, Copenhagen, Denmark, 13 September 2002.
 International Center for Mathematical Modeling Center, Växjö University, Växjö, Sweden, 10 September 2002.
 Quantum Lunch, Los Alamos National Laboratory, Los Alamos, New Mexico, 29 August 2002.
 Feynman Festival, University of Maryland, College Park, Maryland, 23 August 2002.
 Sixth International Conference on Quantum Communication, Measurement and Computing, Massachusetts Institute of Technology, Cambridge, Massachusetts, 24 July 2002.
 International Conference on Quantum Information: Conceptual Foundations, Developments and Perspectives, Oviedo, Spain, 15 July 2002.
 Physics Seminar, Griffith University, Nathan, Australia, 13 June 2002.
 Center for Quantum Computer Technology Seminar, University of Queensland, Brisbane, Australia, 6 June 2002.
 Symmetries and Mysteries: A Symposium on the Occasion of David Mermin's Retirement, Cornell University, Ithaca, New York, 12 May 2002.
 AMO Physics Seminar, New York University, New York, New York, 17 April 2002.
 CNRI Quantum Information Theory Workshop, Dublin Institute of Technology, Dublin, Ireland, 22 March 2002.
 American Mathematical Society Meeting, Atlanta, Georgia, 8 March 2002.
 Research Seminar, Graduate School of Information Sciences, Tohoku University, Sendai, Japan, 22 February 2002.

Workshop on Information Technology Solutions for Challenges Facing the 21st Century Army, National Defense University, Washington, DC, 14 November 2001.

10th UK Conference on the Foundations of Modern Physics, Belfast, Ireland, 13 September 2001.

Quantum Theory: Reconsideration of Foundations, Växjö, Sweden, 17 June 2001.

Information Theory and Its Applications to Biology, Finance and Physics, Warsaw, Poland, 23 May 2001.

American Mathematical Society Meeting, Hoboken, New Jersey, 28 April 2001.

Second Tokyo International Quantum Information Seminar, Tokyo, Japan, 13 March, 2001.

Research Program on Quantum Measurement and Information, Erwin Schrödinger International Institute for Mathematical Physics, Vienna, Austria, 8 December 2000.

Mathematical Physics Seminar, Technical University of Budapest, Budapest, Hungary, 4 December 2000.

Workshop on Quantum Computation and Information, California Institute of Technology, Pasadena, California, 15 November 2000.

Annual Meeting, Optical Society of America, Rhode Island Convention Center, Providence, Rhode Island, 23 October 2000.

Physics Colloquium, University of North Carolina, Chapel Hill, North Carolina, 29 September 2000.

Quantum Information Seminar, Bell Labs, Lucent Technologies, Murray Hill, New Jersey, 16 August 2000.

Fifth International Conference on Quantum Communication Measurement & Computing (QCMC-Y2K), Capri, Italy, 5 July 2000.

NATO Advanced Research Workshop on Decoherence and its Implications in Quantum Computation and Information Transfer, Mykonos, Greece, 26 June 2000.

Department of Applied Mathematics, University of Bristol, Bristol, England, 7 June 2000.

Bell Labs, Lucent Technologies, Murray Hill, New Jersey, 31 May 2000.

Meeting on Quantum Foundations in the Light of Quantum Information and Cryptography, Université de Montréal, Montréal, Canada, 17 May 2000.

952nd American Mathematical Society Meeting, University of Massachusetts Lowell, Lowell, Massachusetts, 1 April 2000.

Quantum Communication Seminar, Tamagawa University, Tokyo, Japan, 8–9 March 2000.

Physics Colloquium, Technion–Israel Institute of Technology, Haifa, Israel, 24 February 2000.

Symposium on Quantum Information Theory, Technion–Israel Institute of Technology, Haifa, Israel, 21 February 2000.

Physics Colloquium, Amherst College, Amherst, Massachusetts, 10 February 2000.

American Mathematical Society Annual Meeting, Washington, DC, 19 January 2000.

QIP 2000, Third Workshop on Quantum Information Processing, Université de Montréal, Montréal, Canada, 11 December 1999.

Chance in Physics: Foundations and Perspectives, Istituto Italiano Per Gli Studi Filosofici, Ischia, Naples, Italy, 29 November 1999.

Second Workshop on Fundamental Problems in Quantum Theory, Baltimore, Maryland, 9 August 1999.

Workshop on Complexity, Computation and the Physics of Information, Isaac Newton Institute, Cambridge, England, 9 July 1999.

Electrical Engineering and Computer Science Special Seminar, Massachusetts Institute of Technology, Cambridge, Massachusetts, 15 March 1999.

Microsoft Research Seminar, Redmond, Washington, 22 February 1999.

AMO Physics Seminar, University of Wisconsin at Madison, Madison, Wisconsin, 11 February 1999.

Southwest Quantum Information and Technology (SQUINT) Network Kickoff Meeting, Almaden, California, 17 December 1998.

Information Physics Seminar, University of New Mexico, Albuquerque, New Mexico, 29 October 1998.

Progress in Quantum Computing, Cryptography and Communication, Benasque Center for Physics, Benasque, Spain, July 1998.

Quantum Algorithms, International Conference and Research Center for Computer Science, Schloss Dagstuhl, Germany, 13 May 1998.

Seminar, Max Planck Institute for Quantum Optics, Garching, Germany, 7 April 1998.

Quantum Communication Seminar, Tamagawa University, Tokyo, Japan, 7 March 1998.

The 1st NASA International Conference on Quantum Computing & Quantum Communication (NASA QCQC'98), Palm Springs, California, 18 February 1998.

IBM Research Division Physics Seminar, Yorktown Heights, New York, 9 February 1998.

Electrical and Computer Engineering Seminar, University of California at Los Angeles, Los Angeles, California, 3 October 1997.

Royal Holloway College Physics Seminar, Egham, England, 19 September 1997.

Electronic Engineering and Computer Systems Seminar, University of Wales, Bangor, Wales, 15 September 1997.

Workshop on Quantum Computation 1997, Institute for Scientific Interchange, Turin, Italy, 30 June 1997.

II Workshop on Quantum Optics and Quantum Computation, Pisa, Italy, 25–28 June 1997.

First Killam Workshop on Quantum Information Theory, Université de Montréal, Montréal, Canada, 27 May 1997.

Atomic Physics Seminar, The University of Texas, Austin, Texas, 15 May 1997.

Mini-Workshop on Information Physics, Center for Advanced Studies, University of New Mexico, Albuquerque, New Mexico, 30 April 1997.

Quantum Information and Computation (QUIC) Institute Seminar, California Institute of Technology, Pasadena, California, 14 April 1997.

AT&T Seminar on Quantum Computation and Error Correction, AT&T Bell Labs, Murray Hill, New Jersey, 19 March 1997.

Information Physics Seminar, University of New Mexico, Albuquerque, New Mexico, 3 March 1997.

Physics Seminar, University of Innsbruck, Innsbruck, Austria, 23 December 1996.

Quantum Information and Computation (QUIC) Institute Workshop for DARPA and ARO, California Institute of Technology, Pasadena, California, 13 November 1996.

Research Program on Quantum Computers and Quantum Coherence, Institute for Theoretical Physics, Santa Barbara, California, October 1996.

Third International Conference on Quantum Communication and Measurement, Tamagawa University, Tokyo, Japan, 27 September 1996.

IBM Research Division Physics Seminar, Yorktown Heights, New York, 31 July 1996.

Workshop on Quantum Computation 1996, Institute for Scientific Interchange, Turin, Italy, 1 July 1996.

Physics Colloquium, Parks College of St. Louis University, St. Louis, Missouri, 17 May 1996.

Workshop on Quantum Computation 1995, Institute for Scientific Interchange, Turin, Italy, 3 July 1995.

Los Alamos National Laboratory “Quantum Lunch,” Los Alamos, New Mexico, 27 January 1995.

Workshop on Quantum Computation, Institute for Scientific Interchange, Turin, Italy, 31 October 1994.

Clarendon Laboratory Theoretical Physics Seminar, Oxford University, Oxford, England, 21 July 1994.

Imperial College of Science, Technology and Medicine Theoretical Physics Seminar, London, England, 20 July 1994.

University of Plymouth Mathematics Seminar, Plymouth, England, 18 July 1994.

Third Santa Fe Workshop on Complexity, Entropy, and Physics of Information, Santa Fe, New Mexico,
19 May 1994.

EXTENDED WORKSHOPS AND RESEARCH VISITS (section under construction):

- Institute of Philosophy, University of Graz, Graz, Austria, 27 July – 5 August 2023.
- Archives Husserl, École Normale Supérieure, Paris, France, 21 April 2023 – 10 May 2023.
- Theoretical Quantum Optics Group, Universität Siegen, Siegen, Germany, 8–15 April 2023.
- Center for Quantum Information and Control (CQuIC), University of New Mexico, Albuquerque, New Mexico, 22 February – 25 March 2023.
- JILA Visiting Fellow, JILA (formerly Joint Institute for Laboratory Astrophysics), Boulder, Colorado, 9 January – 21 February 2023.
- Institute for Quantum Optics and Quantum Information (IQOQI), University of Vienna, Vienna, Austria, 13–21 December 2022.
- Progress in Quantum Computing, Cryptography and Communication, Benasque Center for Physics, Benasque, Spain, 5–25 July 1998.
- Workshop on Quantum Computation 1997, Institute for Scientific Interchange, Turin, Italy, 29 June – 13 July 1997.
- Research Program on Quantum Computers and Quantum Coherence, Institute for Theoretical Physics, Santa Barbara, California, 14 October – 9 November 1996.
- Workshop on Quantum Computation 1996, Institute for Scientific Interchange, Turin, Italy, 17 June – 6 July 1996.
- Workshop on Quantum Computation 1995, Institute for Scientific Interchange, Turin, Italy, 25 June – 9 July 1995.
- Workshop on Quantum Computation 1994, Institute for Scientific Interchange, Turin, Italy, 24 October – 5 November 1994.

MEDIA COVERAGE, BOOK REVIEWS, ETC., TOUCHING ON MY RESEARCH:

- Adam Frank, “What reality does quantum theory describe? QBism has a radical answer,” *Big Think*, 25 January 2024, <https://bigthink.com/13-8/qbism-quantum-reality/>.
- Bryan Walsh, “Christopher Fuchs is revolutionizing how we understand our quantum reality,” profile as part of the “2023 Vox Future Perfect 50” list of thinkers “working on solutions to today’s (and tomorrow’s) biggest problems,” *Vox.com*, 29 November 2023, <https://tinyurl.com/48ef7jxh>. [Story blurb: “The physicist and co-founder of the QBism theory is shaking up his field.”]
- Simon Devos, “Les Lois de la Nature: Et si la physique devait renoncer?” *Epsilon*, Hors Série N° 9, 86–93 (28 November 2023).
- Adam Frank, “QBism and the philosophical crisis of quantum mechanics,” *Big Think*, 5 October 2023, <https://bigthink.com/13-8/qbism-philosophical-crisis-quantum-mechanics/>.
- Adam Frank, “‘QBism’: The most radical interpretation of quantum mechanics ever,” *Big Think*, 7 September 2023, <https://bigthink.com/13-8/qbism-quantum-physics/>. (Reposted at Phil’s Stock World!)
- Dong Weiyuan, “Quantum to Classical Emergence: Understanding Schrödinger’s Cat from an Information Perspective,” Tencent News (one of the largest Chinese news portals), 3 September 2023, <https://new.qq.com/rain/a/20230903A01GWW00>.
- Sean Bailly, “L’ami de Wigner, un paradoxe mis à l’épreuve,” *Pour la Science*, Hors-série N° 107, 24 July 2023, <https://tinyurl.com/mrv282fr>.
- Massimiliano Bonne, “‘Lo Dice La Scienza’: La Via Cieca del Culto Scientista,” *Nuovo Giornale Nazionale*, 16 July 2023, <https://tinyurl.com/r28b26zw>.
- Pieter de Jong, “There are Other Cats than Just Schrödinger’s,” *Medium*, 7 July 2023, <https://tinyurl.com/2trda3h6>.
- Editorial, “A new century of quantum physics,” *Nature Reviews Physics* 5, 317 (2023), 6 June 2023, <https://www.nature.com/articles/s42254-023-00600-4>.

- Wilhelm Schultz, “Quantum Physics and Determinism: Unraveling the Uncertainties,” *Medium*, 22 May 2023, <https://tinyurl.com/mr3rmryp>.
- Sanju Basu, “Unraveling QBism: A Deep Dive into Quantum Bayesianism,” *Medium*, 25 May 2023, <https://tinyurl.com/mvpsm9bz>.
- Robert P. Crease, Jennifer Carter, and Gino Elea, “Let’s talk about quantum 2.0: why we need to sharpen up our language,” *Physics World*, 24 April 2023, <https://tinyurl.com/35cpkf5s>.
- Ruediger Schack, “‘QBism’: Quantum mechanics is not a description of objective reality—it reveals a world of genuine free will,” *The Conversation*, 29 March 2023, <https://tinyurl.com/bder9m6u>.
- Marcelo Gleiser, “The weirdness of quantum mechanics forces scientists to confront philosophy,” *Big Think*, 8 February 2023, <https://tinyurl.com/42zmkwz7>.
- Adam Frank, “Quantum physics forces us to make really weird choices,” *Big Think*, 6 October 2022, <https://tinyurl.com/2p89ezmx>.
- Robert P. Crease, “When physicists and philosophers realize they share a noble truth,” *Physics World*, 24 August 2022, <https://tinyurl.com/yx7nfufw>.
- Sean M. Carroll, “Addressing the quantum measurement problem,” *Physics Today* **75**(7), 62–63 (July 2022).
- N. David Mermin, “There is no quantum measurement problem,” *Physics Today* **75**(6), 62–63 (June 2022).
- Zia Steele, “Could We Hack Physics? How Computer Science Might Help Us Reprogram Reality,” *Medium*, 27 June 2022, <https://medium.com/whiteboard-to-infinity/could-we-hack-physics-358acbb9c482>.
- Adam Frank, “What is quantum mechanics trying to tell us?,” *Big Think*, 2 June 2022, <https://bigthink.com/13-8/quantum-mechanics-interpretation/>.
- Timothy Andersen, “Quantum Wittgenstein,” *Aeon* (digital magazine), 12 May 2022, <https://aeon.co/essays/how-wittgenstein-might-solve-both-philosophy-and-quantum-physics>.
- Amanda Gefter, “Amanda Gefter on Schrödinger’s QBist cat,” in “The many meanings of Schrödinger’s cat,” IAI News, 24 February 2022, <https://tinyurl.com/mr4cfr32>.
- Bob Henderson, “My Quantum Leap: The theory of physics that showed me a new reality,” *Nautilus Magazine*, 23 February 2022, <https://nautil.us/my-quantum-leap-14132/>.
- Unsigned story, “Study: Science Fiction Not as Strange as Quantum Physics Fact,” *Mind Matters News*, 13 February 2022, <https://tinyurl.com/2p8dvjep>.
- John Horgan, “Dreams, reality, and quantum mechanics,” *The Stute* (student newspaper of Stevens Institute of Technology), 11 February 2022, <https://thestute.com/2022/02/11/dreams-reality-and-quantum-mechanics/>.
- John Horgan, “Does Quantum Mechanics Reveal That Life Is But a Dream?,” *Scientific American*, 2 February 2022, <https://tinyurl.com/mvskbf5a>.
- Michel Bitbol, “La physique quantique remet en question tout ce que nous pensions savoir sur ce que fait une science, et sur ce qu’est la nature,” *Philosophie Magazine*, 29 January 2022, <https://tinyurl.com/jcdzbnc5>.
- Robert P. Crease, “Quantum Conundrum,” *Physics World*, December 2021, page 33.
- Frank O’Shea, “In Helgoland, Carlo Rovelli [sic] tries valiantly to make the impenetrable clearer than mud,” *The Canberra Times*, 9 October 2021, <https://tinyurl.com/3ufpwxu5>.
- John Horgan, “Is There a Thing, or a Relationship *between* Things, at the Bottom of Things?,” *Scientific American*, 20 September 2021, <https://tinyurl.com/2vc4r7nv>.
- Blake Stacey, “Quantum mechanics and our part in creating reality,” IAI News, 8 September 2021, <https://tinyurl.com/8su88w3b>.
- Abigail Beall, “Who or What Collapses the Wave Function?,” *New Scientist* **251**(3349), 36–37, 40–41, 28 August 2021.

- Beom Jun Kim, “Beom-Jun Kim’s Physics Next Door: Subject,” *The Kyunghyang Shinmun* [a major South Korean newspaper], 19 August 2021, <https://m.khan.co.kr/opinion/column/article/202108190300015/amp>.
- Marcelo Gleiser, “The Einstein-Bohr legacy: can we ever figure out what quantum theory means?,” *Big Think*, 16 June 2021, <https://tinyurl.com/mkahaa6r>.
- Carlo Rovelli, *Helgoland: Making Sense of the Quantum Revolution*, (Riverhead Books, New York, 2021), pages 65–69, 87–88.
- Adam Frank, “Does quantum mechanics favor Buddhist philosophy?,” *Big Think*, 20 May 2021, <https://bigthink.com/13-8/quantum-mechanics-buddhism/>.
- Dominic Walliman, “The Interpretations of Quantum Mechanics Mini Skirt,” <https://images.app.goo.gl/wcxRmrhHJq4LWsCy8>, first marketed sometime in 2019 or 2020.
- John Horgan, “I’m Agonizing over My Naïve Realism,” *Scientific American*, 19 March 2021, <https://tinyurl.com/y6vjvv8j>.
- Charles Pinter, *Mind and the Cosmic Order: How the Mind Creates the Features & Structure of All Things, and Why this Insight Transforms Physics*, (Springer, Cham, Switzerland, 2021), pages 4, 141–142, 156–159, 167.
- Woody Paige, “Picking a Denver Broncos quarterback isn’t quantum physics, it’s tougher,” *The Gazette* [a Colorado Springs, CO newspaper], 13 January 2021, <https://tinyurl.com/y3h9nheh>.
- Lisa Allen, “Student Spotlight: John DeBrotta,” *UMass Boston Research Magazine*, Vol. II, 12 (December 2020).
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