Andrew N. Jordan

Institute for Quantum Studies and Schmid College of Science
Chapman University
Kennedy Chair in Physics
585 730 9974
jordan@chapman.edu
https://sites.google.com/view/andrewnjordan
DOB: July 30, 1975

Education and Training

Texas A & M University, College Station, TX	Physics and Math	BS	1997
University of California, Santa Barbara, CA	Physics	PhD	2002

Research and Professional Experience

2025-present	Managing Director, Institute for Quantum Studies and Professor of Physics, Chapman University, Orange, CA
2021-2025	Co-Director, Institute for Quantum Studies and Professor of Physics, Chapman University, Orange, CA
2015-2021	Professor of Physics, Department of Physics and Astronomy, University of Rochester, Rochester NY
2012-2015	Associate Professor of Physics with tenure, Department of Physics and Astronomy, University of Rochester, Rochester NY
2006-2012	Assistant Professor of Physics, Department of Physics and Astronomy, University of Rochester, Rochester NY
2005-2006	Research Scientist, Texas A & M University, College Station, TX
2002-2006	Postdoctoral Fellow, University of Geneva, Geneva, Switzerland

Secondary Appointments

2021-present	Professor of Physics (Research), Department of Physics and Astronomy, University of Rochester, Rochester NY
2012-2021	Affiliated Scholar, Institute for Quantum Studies, Chapman University, Orange, CA
2015	Visiting Professor, École Polytechnique, Paris, France
2010	Visiting Professor, University of Geneva, Geneva, Switzerland

Professional Memberships

American Physical Society (APS)
The Optical Society (OSA)

Honors and Awards

NSF CAREER award, 2009
Teaching Award in Physics and Astronomy, 2010
Simons Fellow in Theoretical Physics, 2017
The Medal of Honor FQMT conference in Prague, Czech Republic, 2024

Kennedy Chair in Physics, Chapman University, 2024

Postdocs supervised
Current: Bibek Bhandari. Former: Shengshi Pang, Cyril Elouard, Étienne Jussiau, Debmalya Das.
PhD students supervised
Former: Nathan Williams, Justin Dressel, Yunjin Choi, Areeya Chantasri, Kevin Lyons, Luis Cortez (visiting), Hazrat Ali (visiting). Philippe Lewalle, John Steinmetz, Jing Yang, Sreenath Kizhakkumpurath, Spencer Rogers, Tathagata Karmakar, Le Hu. Current: Alok Nath Singh, Abhishek Chakraborty, Robert Czupryniak, Kagan Yanik, Irwin Huang, Adithi Ajith, Muxi Liu, Haorui Chen.
Undergraduate research students supervised
Former: Taylor Patti, Ivan Frantz, Zhuoxuan Xie, Kurt Cylke, Sean Karg, Rudolph Mayrhofer, Kagan Yanik, Andrew Hess.

Research Support – Raised more than $10m in research support from NSF, DOE, DOD, and private foundations.

Service – Divisional Associate Editor for Physical Review Letters; Editor in Chief for Quantum Studies: Mathematics and Foundations; Conference organizer for numerous international conferences; Scientific board member of various Institutes and international Conferences.

Publications
A complete publication list of 207 items may be found on my website, along with 7 patents. Total Google Scholar citation number: 11775; h-index: 56 on 2/03/2026.

Principal Publications:

Quantum measurement: Theory and practice
AN Jordan, IA Siddiqi
Cambridge University Press (2024)

Ultrasensitive beam deflection measurement via interferometric weak value amplification
PB Dixon, DJ Starling, AN Jordan, JC Howell
Physical review letters 102 (17), 173601 (2009)

Colloquium: Understanding quantum weak values: Basics and applications
J Dressel, M Malik, FM Miatto, AN Jordan, RW Boyd
Reviews of Modern Physics 86 (1), 307-316 (2014)

Thermoelectric energy harvesting with quantum dots
B Sothmann, R Sánchez, AN Jordan
Nanotechnology 26 (3), 032001 (2014)

Technical advantages for weak-value amplification: when less is more
AN Jordan, J Martínez-Rincón, JC Howell

Physical Review X 4 (1), 011031 (2014)

Weak values and the Leggett-Garg inequality in solid-state qubits
NS Williams, AN Jordan
Physical review letters 100 (2), 026804 (2008)

Undoing a weak quantum measurement of a solid-state qubit
AN Korotkov, AN Jordan
Physical review letters 97 (16), 166805 (2006)

Optimizing the signal-to-noise ratio of a beam-deflection measurement with interferometric weak values
DJ Starling, PB Dixon, AN Jordan, JC Howell
Physical Review A—Atomic, Molecular, and Optical Physics 80 (4), 041803 (2009)

Precision frequency measurements with interferometric weak values
DJ Starling, PB Dixon, AN Jordan, JC Howell
Physical Review A—Atomic, Molecular, and Optical Physics 82 (6), 063822 (2010)

Mapping the optimal route between two quantum states
SJ Weber, A Chantasri, J Dressel, AN Jordan, KW Murch, I Siddiqi
Nature 511 (7511), 570-573 (2014)

Experimental violation of two-party Leggett-Garg inequalities with semiweak measurements
J Dressel, CJ Broadbent, JC Howell, AN Jordan
Physical review letters 106 (4), 040402 (2011)

Optimal adaptive control for quantum metrology with time-dependent Hamiltonians
S Pang, AN Jordan
Nature communications 8 (1), 14695 (2017)

Powerful and efficient energy harvester with resonant-tunneling quantum dots
AN Jordan, B Sothmann, R Sánchez, M Büttiker
Physical Review B—Condensed Matter and Materials Physics 87 (7), 075312 (2013)

Stochastic path integral formulation of full counting statistics
S Pilgram, AN Jordan, EV Sukhorukov, M Büttiker
Physical Review Letters 90 (20), 206801 (2003)

Significance of the imaginary part of the weak value
J Dressel, AN Jordan
Physical Review A—Atomic, Molecular, and Optical Physics 85 (1), 012107 (2012)

Efficient quantum measurement engines
C Elouard, AN Jordan
Physical review letters 120 (26), 260601 (2018)

Continuous phase amplification with a Sagnac interferometer

DJ Starling, PB Dixon, NS Williams, AN Jordan, JC Howell
Physical Review A—Atomic, Molecular, and Optical Physics 82 (1), 011802 (2010)

Contextual values of observables in quantum measurements
J Dressel, S Agarwal, AN Jordan
Physical Review Letters, 104 (24), 240401 (2010)

Rectification of thermal fluctuations in a chaotic cavity heat engine
B Sothmann, R Sánchez, AN Jordan, M Büttiker
Physical Review B—Condensed Matter and Materials Physics 85 (20), 205301 (2012)

Leggett-Garg inequality with a kicked quantum pump
AN Jordan, AN Korotkov, M Büttiker
Physical review letters 97 (2), 026805 (2006)

Two-qubit engine fueled by entanglement and local measurements
L Bresque, PA Camati, S Rogers, K Murch, AN Jordan, A Auffèves
Physical Review Letters 126 (12), 120605 (2021)