Curriculum Vitae

CHRISTOPHER JARZYNSKI

Distinguished University Professor
Department of Chemistry and Biochemistry
Institute for Physical Science and Technology
Department of Physics
University of Maryland, College Park, MD 20742
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Personal Data

Born November 23, 1965, Washington, D.C.; U.S. Citizen; married

Higher Education

Princeton University
A.B. in Physics, with High Honors, June 1987

University of California, Berkeley
Ph.D. in Physics, May 1994
Dissertation: *Studies in Chaotic Adiabatic Dynamics*
Advisors: W.J. Świątecki (LBNL), R.G. Littlejohn (UC Berkeley)

Employment History

Research Associate
Institute for Nuclear Theory, University of Washington, July 1994 to August 1996

Director-Funded Postdoctoral Fellow, then Research Associate
Los Alamos National Laboratory, August 1996 to August 1999

Technical Staff Member
Los Alamos National Laboratory, August 1999 to July 2006

Associate Professor, with tenure
University of Maryland, College Park, August 2006 to June 2010

Professor
University of Maryland, College Park, July 2010 to present

Director
Institute for Physical Science and Technology (UMCP), July 2014 to present

Fellowships, Awards, and Other Distinctions

- Fulbright Scholarship, Warsaw, Poland, 1987 - 88
- Department of Education Fellowship, UC Berkeley, 1989 - 91
- Outstanding Teaching Assistant Award, UC Berkeley, 1990
- Raymond and Beverly Sackler Prize in the Physical Sciences, 2005
- Publication # 14 recognized as the Milestone Letter of 1997
  Physical Review Letters, 2008, `http://prl.aps.org/50years/milestones`
- Outstanding Referee for American Physical Society Journals, 2009
- Fellow, American Physical Society, 2009
- Distinguished University Professor, University of Maryland, 2014
- Fellow, American Academy of Arts and Sciences, 2016
- Kenneth S. Pitzer Memorial Lecture, UC Berkeley, 2017
- Einstein Colloquium, Weizmann Institute, Israel, 2018
- Lars Onsager Prize, American Physical Society, 2019

Professional Activities

- Editorial Board, *Journal of Statistical Mechanics: Theory and Experiment*, 2008 - present
- Editorial Board, *Journal of Statistical Physics*, 2008 - 2010
- Associate Editor, *Journal of Statistical Physics*, 2011 - present
- International Advisory Committee, XXIV IUPAP International Conference on Statistical Physics (Statphys24), Cairns, Australia, July 19 - 23, 2010
- International Advisory Committee, XXV IUPAP International Conference on Statistical Physics (Statphys25), Seoul, Korea, July 22 - 26, 2013
- Organizing Committee, Conference on "Shortcuts to adiabaticity, optimal quantum control, and thermodynamics"
  Telluride Science Research Center, Telluride, Colorado, July 14 - 18, 2014
- International Advisory Committee, XXVI IUPAP International Conference on Statistical Physics (Statphys26), Lyon, France, July 18 - 22, 2016
- APS Search Committee for Editor of Physical Review X, Fall, 2015
- External Review Committee, Center for Nonlinear Studies, Los Alamos National Lab
  May 1 - 2, 2015; February 19 - 20, 2016; May 4 - 5, 2018
- Scientific Committee, Frontiers of Quantum and Mesoscopic Thermodynamics
  Prague, Czech Republic, July 9 - 15, 2017
- Organizing Committee, ICTS Workshop on Large Deviations
  Bangalore, India, August - October, 2017
- Organizing Committee, Conference on Recent Advances in Modelling Rare Events
  Agra, India, December 7 - 10, 2017

Postdoctoral Research Mentoring

- Dr. Saar Rahav (2006 - 2008)
- Dr. Jodi Basner (2006 - 2008)
- Dr. Haitao Quan (2010 - 2012)
- Dr. Sebastian Deffner, DAAD Fellow (2011 - 2014)
- Dr. Yigit Subasi (2014 - 2016)
- Dr. Oren Raz, James S. McDonnell Fellow (2014 - 2017)
- Dr. Raam Uzdin, (spring, 2016)

Graduate Research Mentoring

- Jordan Horowitz, PhD 2010
- Suriyanarayanan Vaikuntanathan, PhD 2011
- Andrew Ballard, PhD 2012
- Dibyendu Mandal, PhD 2013
- Shaon Chakrabarti, PhD 2015 (joint with Prof. D. Thirumalai)
- Zhiyue Lu, PhD 2015
- Jeffrey Demers, PhD 2016
- Ayoti Patra, PhD 2017
- Andrew Smith (2014 - present)
- Victor Dagard (spring, 2016, intern from France)
- Daniel Busiello (spring, 2017, intern from Italy)
- Carlos Floyd (2017 - present, joint with Prof. G. Papoian)
- Wade Hodson (2017 - present)

Undergraduate Research Mentoring

- Jessica Tams (summer, 1996)
- David Hendrix (summer, 1999)
- Jonathan Jerke (summer, 1999)
- Steven Watterson (summer, 2000)
- Morgan Sonderegger (summer, 2002)
- Mary Yanik (spring, 2011)
- Sarah Bard (spring and fall, 2017; spring, 2018)

Invited Presentations, 2002 - Present

(does not include all seminar-level talks)

- Invited Lecturer, Winter School of Theoretical Physics
  Dynamical Semigroups: Dissipation, Chaos, Quanta
  Lądek Zdrój, Poland, February 6 - 15, 2002
- Invited Speaker, Entropy Production and Fidelity Workshop
  Albuquerque, New Mexico, March 4 - 5, 2002
- Invited Colloquium Speaker, Department of Physics and Astronomy
  Dartmouth College, Hanover, New Hampshire, March 29, 2002

- Invited Colloquium Speaker, Department of Physics
  University of Maryland, College Park, Maryland, April 8, 2003
- Invited Speaker, CECAM-ESF Workshop on Stochasticity and Sensitivity
  Lyon, France, May 5 - 7, 2003
- Invited Speaker, SPIE International Symposium on Fluctuations and Noise
  Santa Fe, New Mexico, June 1 - 4, 2003
- Invited Speaker, Frontiers in Engineering Symposium
  Irvine, California, September 18 - 20, 2003

- Invited Speaker, Winter Colloquium on The Physics of Quantum Electronics
  Snowbird, Utah, January 4 - 8, 2004
- Invited Speaker, Sanibel Symposium, Biophysics Session
  St. Augustine, Florida, February 28 - March 5, 2004
- Invited Speaker, CECAM Meeting
  Continuing Challenges in Free Energy Calculations
  Lyon, France, May 12 - 14, 2004
- Invited Speaker, Workshop on Quantum Dissipation
  Haifa, Israel, May 16 - 21, 2004
- Invited Speaker, ESI Workshop on Stochastic and Deterministic Dynamics
  Vienna, Austria, August 25 - 28, 2004
- Invited Lecturer, Woodward Lecture Series in the Chemical Sciences (Harvard-MIT)
  Cambridge, Massachusetts, October 7, 2004

- Invited Speaker, Session on "Dynamics in Condensed Phase"
  American Physical Society March Meeting
  Los Angeles, California, March 21 - 25, 2005
- Invited Speaker, Stochasticity and Nonlinearity on Three Continents
  Santa Fe, New Mexico, March 30 - April 2, 2005
- Invited Colloquium Speaker, The James Franck Institute
  University of Chicago, Illinois, April 5, 2005
- Invited Speaker, Tel Aviv Symposium in Chemical Physics
  Tel Aviv University, Israel, May 23, 2005
- Invited Speaker, Nobel Symposium, Controlled Nanoscale Motion
  Gothenburg, Sweden, June 13 - 17, 2005
- Invited Speaker, Telluride Research Workshop on Single Molecule Measurements

Telluride, Colorado, August 7 - 13, 2005

- Invited Speaker, 20th Nishinomiya-Yukawa Symposium
  Nishinomiya City and Yukawa Institute (Kyoto), Japan, October 3 - 7, 2005
- Invited Speaker, 94th Statistical Mechanics Conference
  Rutgers University, New Jersey, December 18 - 20, 2005

- Invited Speaker, 2006 Berkeley Mini Statistical Mechanics Meeting
  University of California, Berkeley, California, January 13 - 15, 2006
- Invited Colloquium Speaker, Department of Physics
  Rice University, Houston, Texas, February 15, 2006
- Invited Speaker, Work, Dissipation, and Fluctuations in Nonequilibrium Physics
  Brussels, Belgium, March 22 - 25, 2006
- Plenary Speaker, 21st General Conference
  Condensed Matter Division, European Physical Society
  Dresden, Germany, March 26 - 31, 2006
- Invited Lecturer, School on Non-Equilibrium Dynamics of Interacting Particle Systems
  Isaac Newton Institute, Cambridge, United Kingdom, March 27 - April 7, 2006
- Invited Colloquium Speaker, Department of Physics
  Emory University, Atlanta, Georgia, September 8, 2006
- Invited Speaker, CECAM Meeting
  Single Molecule Force Experiments and Simulations
  Lyon, France, September 26 - 29, 2006
- Invited Speaker, Nonequilibrium Day Workshop, University of Barcelona
  Barcelona, Spain, October 2, 2006
- Invited Colloquium Speaker, Department of Physics
  University of Georgia, Athens, Georgia, November 30, 2006

- Invited Speaker, Session on "Nonequilibrium Thermodynamics"
  American Physical Society March Meeting
  Denver, Colorado, March 5 - 9, 2007
- Invited Colloquium Speaker, Department of Chemistry
  New York University, New York, March 23, 2007
- Invited Speaker, Complexity of Biological and Soft Materials
  Santa Fe, New Mexico, May 21 - 25, 2007
- Plenary Speaker, Statphys 23 (IUPAP International Conference on Statistical Physics)
  Genoa, Italy, July 9 - 13, 2007
- Invited Lecturer, One-week (10-hour) course on Nonequilibrium Thermodynamics
  Institute Henri Poincaré, Paris, France, September 17 - 22, 2007
- Invited Colloquium Speaker, Department of Physics
  Johns Hopkins University, Baltimore, Maryland, September 27, 2007
- Invited Speaker, International Symposium on Linear Response Theory
  University of Tokyo, Japan, November 5 - 7, 2007
- Invited Speaker, Mechanical Engineering Seminar
  Yale University, New Haven, Connecticut, November 28, 2007

- Invited Speaker, Workshop on Protein Folding

Institute for Mathematics and its Applications
University of Minnesota, Minneapolis, January 14 - 18, 2008

- Invited Colloquium Speaker, Department of Physics
  University of Washington, Seattle, Washington, February 11, 2008
- Invited Condensed Matter Seminar Speaker, Department of Physics
  University of Pennsylvania, Philadelphia, Pennsylvania, March 26, 2008
- Plenary Speaker, Mathematical and Numerical Methods for Free Energy Calculations
  Banff International Research Station, Banff, Canada, June 15 - 20, 2008
- Invited Speaker, Francqui Colloquium
  Brussels, Belgium, September 3 - 6, 2008
- Invited Speaker, Department of Physics
  James Madison University, Harrisonburg, Virginia, October 16, 2008
- Invited Colloquium Speaker, Department of Physics
  Virginia Tech, Blacksburg, Virginia, October 17, 2008
- Invited Colloquium Speaker, Center for Computational Biology
  Washington University, Saint Louis, Missouri, October 27, 2008
- Invited Speaker, 100th Statistical Mechanics Conference
  Rutgers University, New Jersey, December 13 - 18, 2008

- Invited Speaker, 2009 Berkeley Mini Statistical Mechanics Meeting
  University of California, Berkeley, California, January 9 - 11, 2009
- Invited Colloquium Speaker, Department of Physics
  Notre Dame University, Notre Dame, Indiana, March 4, 2009
- Invited Colloquium Speaker, Department of Physics and Astronomy
  University of Calgary, Alberta, Canada, March 20, 2009
- Invited Colloquium Speaker, Department of Physics
  Georgetown University, Washington, DC, April 28, 2009
- Invited Lecturer, Boulder School for Condensed Matter and Materials Physics
  Boulder, Colorado, July 6 - 10, 2009
- Invited Speaker, Frontiers in Nonequilibrium Physics
  Yukawa Institute for Theoretical Physics
  Kyoto, Japan, August 3 - 7, 2009
- Invited Lecturer, International Summer School
  Fundamental Problems in Statistical Physics
  Leuven, Belgium, September, 2009
- Invited Colloquium Speaker, Department of Physics
  University of Virginia, Charlottesville, October 30, 2009

- Invited Speaker, American Chemical Society National Meeting
  San Francisco, California, March 21 - 25, 2010
- Invited Colloquium Speaker, Department of Physics
  University of Rochester, New York, April 28, 2010
- Invited Colloquium Speaker, Department of Physics
  Syracuse University, Syracuse, New York, April 29, 2010
- Invited Speaker, Mid-Atlantic Soft Matter Workshop

Georgetown University, Washington, DC, June 18, 2010

- Invited Speaker, The INT at 20: The Future of Nuclear Physics and its Intersections
  Institute for Nuclear Theory, University of Washington
  Seattle, Washington, July 1 - 2, 2010
- Invited Speaker, American Chemical Society National Meeting
  Boston, Massachusetts, August 21 - 25, 2010
- Invited Speaker
  Complex Driven Systems: From Statistical Physics to the Life Sciences
  Virginia Tech, Blacksburg, Virginia, October 1 - 3, 2010
- Invited Speaker, Optimization in Stochastic Nano-Systems
  Delmenhorst, Germany, October 10 - 13, 2010
- Invited Speaker, Séminaire Poincaré, "Le Temps"
  Paris, France, December 4, 2010

- Invited Colloquium Speaker, Department of Physics
  Harvard University, Boston, Massachusetts, February 7, 2011
- Invited Speaker, Quantitative Biology Seminar
  Los Alamos National Laboratory, Los Alamos New Mexico, April 5, 2011
- Invited Speaker, 105th Statistical Mechanics Conference
  Rutgers University, New Jersey, May 8 - 9, 2011
- Invited Colloquium Speaker, Department of Physics
  Brookhaven National Laboratory, Upton, New York, May 10, 2011
- Invited Lecturer, Summer School on Statistical Physics of Complex and Small Systems
  Mallorca, Spain, September 19 - 23, 2011
- Invited Speaker, Nonequilibrium Fluctuation Relations In Quantum Systems
  Mallorca, Spain, September 23 - 24, 2011
- Invited Colloquium Speaker, Department of Physics
  University of Delaware, Newark, Delaware, October 26, 2011
- Invited Colloquium Speaker, Department of Chemistry
  University of Maine, Orono, Maine, November 17, 2011
- Invited Colloquium Speaker, Santa Fe Institute
  Santa Fe, New Mexico, December 7, 2011

- Invited "First Tuesday Colloquium" Speaker, James Franck Institute
  University of Chicago, Illinois, February 7, 2012
- Invited Speaker, DOE Nonequilibrium Energy Research Center Annual Symposium
  Northwestern University, Evanston, Illinois, March 5, 2012
- Invited Lecturer, School on Statistical Physics
  Raman Research Institute, Bangalore, India, April 2 - 7, 2012
- Invited Colloquium Speaker, Department of Physics
  Princeton University, Princeton, New Jersey, April 12, 2012
- Invited Speaker, Distinguished Lecturer Series, Racah Institute of Physics
  Hebrew University, Jerusalem, Israel June 11 - 15, 2012
- Plenary Speaker, Istanbul Statistical Physics Days
  Istanbul, Turkey, June 28 - 30, 2012

- Invited Speaker, Nobel Symposium, Nanoscale Energy Converters
  Örenäs Castle, Sweden, August 12 - 16, 2012
- Invited Speaker, 25th Smoluchowski Symposium on Statistical Physics
  Krakow, Poland, September 9 - 13, 2012
- Invited Colloquium Speaker, Department of Physics
  Carnegie Mellon University, Pittsburgh, Pennsylvania, October 15, 2012
- Invited Colloquium Speaker, Department of Physics
  Arizona State University, Tempe, Arizona, November 8, 2012

- Invited Colloquium Speaker, Department of Physics
  University of Colorado, Boulder, Colorado, February 13, 2013
- Invited Colloquium Speaker, Department of Chemistry
  Columbia University, New York, New York, March 14, 2013
- Plenary Speaker, XXXVI National Meeting on Condensed Matter Physics
  Águas de Lindóia, Brazil, May 13 - 17, 2013
- Invited Speaker and Participant
  Advanced Molecular Simulation Methods in the Physical Sciences
  Kavli Institute for Theoretical Physics, Beijing, China, June 19 - July 5, 2013
- Invited Speaker and Participant
  Small system nonequilibrium fluctuations, dynamics and stochastics
  Kavli Institute for Theoretical Physics, Beijing, China, July 1 - 10, 2013
- Invited Speaker, Frontiers of Statistical Physics and Information Processing
  Kyoto, Japan, July 11 - 14, 2013
- Invited Speaker, Solvay Workshop on "Thermodynamics of Small Systems"
  Brussels, Belgium, December 2 - 4, 2013

- Invited Featured Speaker, Complex Systems Seminar Series
  Northwestern University, Evanston, Illinois, January 30, 2014
- Invited Colloquium Speaker, Department of Physics
  Northwestern University, Evanston, Illinois, January 31, 2014
- Invited Colloquium Speaker, Department of Physics
  University of Maryland, College Park, Maryland, March 25, 2014
- Invited Colloquium Speaker, Department of Physics
  Texas A & M University, College Station, Texas, March 27, 2014
- Invited Speaker, Physical Chemistry Seminar Series
  University of California, San Diego, April 8, 2014
- Invited Speaker
  Shortcuts to Adiabaticity, Optimal Quantum Control, and Thermodynamics
  Telluride Science Research Center, Telluride, Colorado, July 14 - 18, 2014
- Invited Speaker, American Conference of Theoretical Chemistry
  Telluride Science Research Center, Telluride, Colorado, July 21 - 24, 2014
- Invited Lecturer, Beg Rohu Summer School on Statistical Physics
  Quiberon, France, September 8 - 20, 2014
- Invited Colloquium Speaker, Department of Physics
  California Insitute of Technology, Pasadena, California, October 9, 2014

- Invited Colloquium Speaker, Department of Physics
  Catholic University of America, Washington, DC, November 12, 2014
- Invited Seminar Speaker, AEP-LASSP
  Cornell University, December 2, 2014

- Invited Speaker, 2015 Berkeley Mini Statistical Mechanics Meeting
  University of California, Berkeley, California, January 9 - 11, 2015
- Invited Speaker, Recent Advances in Non-equilibrium Physics
  University of Luxembourg, January 13 - 15, 2015
- Invited Speaker, Session on "Thermodynamics and Information Processing in Biochemical Networks",
  American Physical Society March Meeting
  San Antonio, Texas, March 2 - 6, 2015
- Invited Speaker, Quantum Lunch Seminar
  Los Alamos National Laboratory, April 30, 2015
- Invited Speaker, Houghton Conference on Non-Equilibrium Statistical Mechanics
  ICERM, Brown University, Providence, Rhode Island, May 5 - 4, 2015
- Invited Speaker, NSF Workshop on the Physics of Wear, Tear, Aging and Failure in Living and Nonliving Systems
  Tyson's Corner, Virginia, May 7 - 8, 2015
- Invited Speaker, iPoLS Conference 2015
  Arlington, Virginia, July 17 - 20, 2015
- Invited Speaker, Frontiers of Quantum and Mesoscopic Thermodynamics
  Prague, Czech Republic, July 21 - August 1, 2015
- Plenary Speaker, XIV Latin American Workshop on Non-Linear Phenomena
  Cartagena, Colombia, September 21 - 25, 2015
- Invited Speaker, Workshop on Large Deviation Theory in Principle and Practice
  Princeton Center for Theoretical Science, November 16 - 18, 2015
- Invited Speaker, 114th Statistical Mechanics Conference
  Rutgers University, New Jersey, December 13 - 15, 2015

- Invited Colloquium Speaker, Department of Physics
  University of Michigan, Ann Arbor, January 13, 2016
- Invited Colloquium Speaker, Department of Physics
  Boston University, March 29, 2016
- Invited Seminar Speaker, Center for Physics and Biology
  Rockefeller University, May 24, 2016
- Invited Speaker, Statistical Physics of Stochastic Optimal Control and Learning
  ARO Workshop, Georgia Tech, June 14 - 15, 2016
- Invited Speaker, Information Engines at the Frontiers of Nanoscale Thermodynamics
  Telluride Science Research Center, Telluride, Colorado, June 23 - July 1, 2016
- Invited Colloquium Speaker, AlbaNova and Nordita Colloquium, Physics Department
  KTH Stockholm, Sweden, September 15, 2016
- Invited Colloquium Speaker, Department of Physics
  University of Illinois, Urbana-Champaign, October 26, 2016

- Invited Speaker, Statistical Physics, Information Processing and Biology
  Santa Fe Institute, Santa Fe, New Mexico, November 16 - 18, 2016

- Invited Speaker, Dynamics Days 2017
  Silver Spring, Maryland, January 4 - 6, 2017
- Invited Speaker, Widely Applied Math Seminar
  Harvard University, February 28, 2017
- Invited Speaker, Session on "Nanothermodynamics and Quantum Information",
  American Physical Society March Meeting
  New Orleans, Louisiana, March 13 - 17, 2017
- Invited Speaker, Non-Markovianity and Strong Coupling Effects in Thermodynamics
  Bad Honnef, Germany, April 10 - 13, 2017
- Invited Speaker, Information and Non-equilibrium Thermodynamics
  Beyond Center for Fundamental Concepts in Sciences
  Scottsdale, Arizona, April 18 - 20, 2017
- Invited Speaker, Frontiers of Quantum and Mesoscopic Thermodynamics
  Prague, Czech Republic, July 9 - 15, 2017
- Invited Speaker, Climate Fluctuations and Non-Equilibrium Statistical Mechanics
  Dresden, Germany, July 16 - 22, 2017
- Invited Speaker, Information Engines at the Frontiers of Nanoscale Thermodynamics
  Telluride Science Research Center, Telluride, Colorado, August 3 - 11, 2017
- Invited Speaker, 30th Marian Smoluchowski Symposium on Statistical Physics
  Krakow, Poland, September 4 - 8, 2017
- Kenneth S. Pitzer Memorial Lecture, College of Chemistry
  University of California, Berkeley, September 19, 2017
- Invited Colloquium Speaker, Department of Physics
  University of Wisconsin - Milwaukee, October 20, 2017
- Invited Speaker, Workshop on Quantum Thermodynamics
  Institute for Theoretical Atomic, Molecular and Optical Physics
  Harvard University, October 30 - November 1, 2017
- Invited Speaker, Recent Advances in Modelling Rare Events
  Agra, India, December 7 - 10, 2017

- Einstein Colloquium, Faculty of Physics
  Weizmann Institute of Science, Rehovot, Israel, March 8, 2018
- Invited Colloquium Speaker, Department of Physics
  Purdue University, April 5, 2018
- Invited Speaker, Origins & Implications of Time in Physical & Adaptive Systems
  Santa Fe Institute, Santa Fe, New Mexico, July 18 - 20, 2018
- Invited Speaker, Information Engines at the Frontiers of Nanoscale Thermodynamics
  Telluride Science Research Center, Telluride, Colorado, July 19 - 27, 2018
- Invited Speaker, RobertFest
  University of California, Berkeley, August 17-18, 2018
- Invited Speaker, Stochastic Thermodynamics: Experiment and Theory
  Dresden, Germany, September 10 - 14, 2018

- Invited Seminar Speaker, Department of Chemistry
  Duke University, September 2, 2018
- Invited Lecturer, Center for Theoretical Sciences
  Carnegie Mellon University, October 19, 2018

Upcoming Invited Presentations

- Invited Colloquium Speaker, Department of Physics
  Emory University, November 13, 2018
- Distinguished Lecture, Community for Research on Active Surfaces and Interfaces
  Georgia Institute of Technology, November 14, 2018
- Invited Speaker, Nonequilibrium Physics in Biology
  Simon's Center for Geometry in Physics, Stony Brook, NY, December 3 - 7, 2018
- Invited Speaker, New Directions in Theoretical Physics
  Higgs Centre for Theoretical Physics, Edinburgh, Scotland, January 9 - 11, 2019
- Invited Speaker, II Workshop on Quantum Information and Thermodynamics
  International Institute of Physics, Natal, Brazil, March 11 - 22, 2019

BIBLIOGRAPHY

Book

Nonequilibrium Statistical Physics of Small Systems: Fluctuation relations and beyond
R. Klages, W. Just and C. Jarzynski, editors
Wiley-VCH, Weinheim (2013)

Articles

1. "Diffusion equation for energy in ergodic adiabatic ensembles"
   C. Jarzynski, *Phys. Rev. A* **46**, 7498 (1992)

2. "A universal asymptotic velocity distribution for independent particles in a time-dependent irregular container"
   C. Jarzynski and W.J. Swiatecki, *Nucl. Phys. A* **552**, 1 (1993)

3. "Some recent results in classical and quantal chaos"
   C. Jarzynski, *Acta Phys. Pol. B* **24**, 463 (1993)

4. "Multiple-time-scale approach to ergodic adiabatic systems: another look"
   C. Jarzynski, *Phys. Rev. Lett.* **71**, 839 (1993)

5. "Energy diffusion in a chaotic adiabatic billiard gas"
   C. Jarzynski, *Phys. Rev. E* **48**, 4340 (1993)

6. "Applications of chaotic adiabatic dynamics: statistical fluctuations in one-body dissipation"
   C. Jarzynski, *Acta Phys. Pol. B* **25**, 681 (1994)

7. "Chaotic adiabatic energy diffusion and the Fermi mechanism"
   C. Jarzynski, *Physica D* **77**, 276 (1994)

8. "Geometric phase effects for wavepacket revivals"
   C. Jarzynski, *Phys. Rev. Lett.* **74**, 1264 (1995)

9. "Geometric phases and anholonomy for a class of chaotic classical systems"
   C. Jarzynski, *Phys. Rev. Lett.* **74**, 1732 (1995)

10. "Thermalization of a Brownian particle via coupling to low-dimensional chaos"
    C. Jarzynski, *Phys. Rev. Lett.* **74**, 2937 (1995)

11. "Evidence for the possible synthesis of element 110 produced by the $^{59}Co + {}^{209}Bi$ reaction"
A. Ghiorso *et al.*, *Phys. Rev. C* **51**, R2293 (1995)

12. "Numerical convergence in solving the Vlasov equation"
C. Jarzynski and G.F. Bertsch, *Phys. Rev. C* **53**, 1028 (1996)

13. "Effect of dynamical correlations in a slowly pumped Knudsen gas"
J. Blocki, C. Jarzynski, and W.J. Swiatecki, *Nucl. Phys. A* **599**, 486 (1996)

14. "Nonequilibrium equality for free energy differences"
C. Jarzynski, *Phys. Rev. Lett.* **78**, 2690 (1997)

15. "Berry's conjecture and information theory"
C. Jarzynski, *Phys. Rev. E* **56**, 2254 (1997)

16. "Equilibrium free energy differences from nonequilibrium measurements: a master equation approach"
C. Jarzynski, *Phys. Rev. E* **56**, 5018 (1997)

17. "Equilibrium free energies from nonequilibrium processes"
C. Jarzynski, *Acta Physica Polonica B* **29**, 1609 (1998)

18. "Computing probabilities of very rare events for Langevin processes"
O. Mazonka, C. Jarzynski and J. Blocki, *Nucl. Phys. A* **641**, 335 (1998)

19. "Feynman's ratchet and pawl: an exactly solvable model"
C. Jarzynski and O. Mazonka, *Phys. Rev. E* **59**, 6448 (1999)

20. "Microscopic analysis of Clausius-Duhem processes"
C. Jarzynski, *J. Stat. Phys.* **96**, 415 (1999)

21. "Hamiltonian derivation of a detailed fluctuation theorem"
C. Jarzynski, *J. Stat. Phys.* **98**, 77 (2000)

22. "How does a system respond when driven away from thermal equilibrium?"
C. Jarzynski, *Proc. Nat. Acad. Sci.* **98**, 3636 (2001) (Invited Commentary)

23. "A 'fast growth' method of computing free energy differences"
D.A. Hendrix, C. Jarzynski, *J. Chem. Phys.* **114**, 5974 (2001)

24. "Targeted free energy perturbation"
C. Jarzynski, *Phys. Rev. E* **65**, 046122 (2002)

25. "Equilibrium and nonequilibrium foundations of free energy computational methods"
C. Jarzynski, *Lecture Notes in Computational Science and Engineering*, Vol. 24
Eds. T. Schlick and H. H. Gan, Springer-Verlag, Berlin (2002).

26. "Quantum chaotic environments, the butterfly effect, and decoherence"
Z. Karkuszewski, C. Jarzynski, and W.H. Zurek,
Phys. Rev. Lett. **89**, 170405 (2002)

27. "What is the microscopic response of a system when it is driven far from equilibrium?"
C. Jarzynski, *Lecture Notes in Physics*, Vol. 597
Eds. Garbaczewski and R. Olkiewicz, Springer-Verlag, Berlin (2002).

28. "Thermal fluctuations in systems driven away from equilibrium"
C. Jarzynski, *Proceedings of SPIE*, Vol. 5110 (2003)

29. "Classical and quantum fluctuation theorems for heat exchange"
C. Jarzynski, D. Wójcik, *Phys. Rev. Lett.* **92**, 230602 (2004)

30. "Nonequilibrium work theorem for a system strongly coupled to a thermal environment"
C. Jarzynski, *J. Stat. Mech.: Theor. Exp.* P09005 (2004)

31. "Experimental test of Hatano and Sasa's nonequilibrium steady state equality"
E. Trepagnier *et al.*, *Proc. Nat. Acad. Sci.* **101**, 15038 (2004)

32. "Unbiased estimators for spatial distribution functions of classical fluids"
A.B. Adib and C. Jarzynski, *J. Chem. Phys.* **122**, 014114 (2005)

33. "Dynamical generalization of nonequilibrium work relations"
V. Chernyak, M. Chertkov, and C. Jarzynski, *Phys. Rev. E* **71**, 025102(R) (2005)

34. "Lag inequality for birth-death processes with time-dependent rates"
C. Jarzynski, *J. Phys. A: Math. Gen.* **38** L227 (2005)

35. "Verification of the Crooks fluctuation theorem and recovery of RNA folding free energies"
D. Collin *et al.*, *Nature* **437**, 231 (2005)

36. "Rare events and the convergence of exponentially averaged work values"
C. Jarzynski, *Phys. Rev. E* **73**, 046105 (2006)

37. "Path-integral analysis of fluctuation theorems for general Langevin processes"
V. Chernyak, M. Chertkov, and C. Jarzynski, *J. Stat. Mech.: Theor. Exp.* P08001 (2006)

38. "Work fluctuation theorems and single-molecule biophysics"
C. Jarzynski, *Progress of Theoretical Physics, Supplement* **165**, 1 (2006)
Proceedings of 20th Nishinomiya-Yukawa Symposium

39. "Nonequilbrium fluctuations of a single biomolecule"
C. Jarzynski, *Lecture Notes in Physics*, Vol. 711
Ed. H. Linke, Springer-Verlag, Berlin (2007)

40. "Work distribution for the adiabatic compression of a dilute, interacting classical gas"
G.E. Crooks and C. Jarzynski, *Phys. Rev. E*, **75**, 021116 (2007)

41. "Comparison of far-from-equilibrium work relations"
C. Jarzynski, *Comptes Rendus Physique* **8**, 495 (2007).

42. "Fluctuation relations and coarse-graining"
S. Rahav and C. Jarzynski, *J. Stat. Mech.: Theor. Exp.* P09012 (2007).

43. "Comparison of work fluctuation relations"
J. Horowitz and C. Jarzynski, *J. Stat. Mech.: Theor. Exp.* P11002 (2007).

44. "Escorted free energy simulations: improving convergence by reducing dissipation"
S. Vaikuntanathan and C. Jarzynski, *Phys. Rev. Lett.* **100**, 190601 (2008).

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