

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 June 2019

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
- Arnold-Sommerfeld Lectures, Ludwig-Maximilians-Universität, Munich, 2019
- Robert S. Mulliken Memorial Lecture, University of Chicago, 2020
- Chandrasekhar Lectures, Tata Institute of Fundamental Research, India, 2020

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)
- Debankur Bhattacharyya (2019 - 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)
- Elliot Kienzle (summer, 2019)

Invited Presentations, 2002 - Present

(does not include all seminar-level talks)

- Invited Lecturer, Winter School of Theoretical Physics
Dynamical Semigroups: Dissipation, Chaos, Quanta
Łądek 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
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- 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
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- 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 stochasticity
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 Institute 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 Bio-chemical 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
- 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
Simons 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 Lecturer, Nonequilibrium Physics of Molecules and Cells
Department of Biophysics, Johns Hopkins University, January 27, 2019
- Invited Speaker, Onsager, Kadanoff, Davisson-Germer Prize Session
American Physical Society March Meeting
Boston, Massachusetts, March 4 - 8, 2019
- Invited Colloquium Speaker, Department of Physics
Virginia Tech, April 26, 2019
- Invited Speaker, Statistical Physics of Complex Systems
Stockholm, Sweden, May 7 - 11, 2019
- Invited Colloquium Speaker, Institute of Physics
École Polytechnique Fédérale de Lausanne, Switzerland, June 3, 2019
- Invited Lecturer, Four-day (14-hour) course on Nonequilibrium Statistical Physics
École Polytechnique Fédérale de Lausanne, Switzerland, June 4-7, 2019
- Invited Speaker, Frontiers in Biophysics
Simon Fraser University, Vancouver, Canada, June 28, 2019
- Invited Speaker, Information Engines at the Frontiers of Nanoscale Thermodynamics
Telluride Science Research Center, Telluride, Colorado, July 25 - August 2, 2019

Upcoming Invited Presentations

- Arnold-Sommerfeld Lectures, Ludwig-Maximilians-Universität
Munich, Germany, Fall, 2019
- Robert S. Mulliken Memorial Lecture, Department of Chemistry
University of Chicago, January 13, 2020
- Infosys-ICTS Subrahmanian Chandrasekhar Lectures (3 lectures)
Tata Institute of Fundamental Research, Bangalore, India, March 9 - 13, 2020
- Opening Keynote Talk, Single Molecule Approaches to Biology
Gordon Research Conference, Castelldefels, Spain, July 5 - 10, 2020

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 $^{59}\text{Co} + ^{209}\text{Bi}$ 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)
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