

Curriculum Vitae
Cynthia Anne Keeler

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Research Interests

Theoretical high energy and gravitational physics

Employment

Aug. 2017 - present: Assistant Professor
Arizona State University, Tempe

2016 - 2017: Assistant Professor
Niels Bohr Institute, Copenhagen

2014-2015: Postdoctoral Appointment
Niels Bohr Institute, Copenhagen

2011-2014: Postdoctoral Appointment
University of Michigan, Ann Arbor

2008-2011: Postdoctoral Appointment
Center for the Fundamental Laws of Nature
Harvard University

Education

University of California, Berkeley

2006: M.A. Physics
2008: Ph.D. Physics, Advisor: Petr Hořava
Thesis: “Beyond the static: Exploring nonequilibrium string theory via
noncritical M-theory and heterotic E_8 tachyon condensation”

Stanford University

2003: B.S. Physics, B.S. Mathematics, Minor in Classics

Awards and Fellowships

2015-2017: Marie Curie International Incoming Fellowship
2015: Rosenfeld Foundation support for PhD School (30.000 kr)
2015: Niels Bohr Institute Fund support for PhD School (30.000 kr)
2005-2008: National Science Foundation Graduate Research Fellowship
2002: Undergraduate Research Opportunity Major Grant at Stanford University

Teaching Experience

- **Thesis Supervision at Niels Bohr Institute**

Sep. 2017: Master's thesis co-supervisor of Emil Have
"On Charged Lifshitz Holography"

- **UC Berkeley Teaching Assistantships**

Fall 2007: "String Theory" for Petr Hořava
Taught sections and graded homework.
Spring 2006: "General Relativity" for Ori Ganor
Graded homework and held office hours.
Spring 2005: "Quantum Mechanics II" for Dung-Hai Lee
Taught weekly sections, graded homework and exams.
Spring/Fall 2004: "Modern Physics" for Adrian Lee
Taught weekly sections and labs, graded exams.
Fall 2003: "Introduction to Mechanics" for Peter Yu
Taught weekly sections and labs, graded exams.

- **Stanford University Teaching Assistantships**

Fall 2002: "Electronics Lab" for Rick Pam
Ran and graded lab sections, supervised student final projects.

- **Educational Programs for Gifted Youth (Stanford Initiative)**

2001-2002: Distance tutor for physics courses.
Spring 2002: Helped develop distance Differential Equations course.
2001-2003: Tutor for EPGY summer courses on special relativity.

- **Other Teaching Experience**

Occasional substitute lecturer as a postdoc: for Finn Larsen, "From Quarks to Cosmos"; for Leo Pando-Zayas, "General Relativity"; and for Henriette Elvang, "Modern Physics".

Committees and Professional Activities

- Reviewer for Physical Review D, Physical Review Letters, Physics Letters B, Journal of High Energy Physics, and European Physical Journal C; Natural Sciences and Engineering Research Council of Canada external reviewer.
- May 2017: minimeeting at NBI
- April 2016: Co-organizer of "Current Themes in Holography: Exact Results, Applications, Extensions, and Fundamentals" conference at NBI.
- October 2015: Co-organizer and lecturer for NBI PhD school entitled "Holography: Entangled, Applied and Generalized".
- 2015-2016: Co-organizer of NBI High Energy Theory Seminars.
- October 2013: Co-organizer of "Black Holes in String Theory" workshop at U. Michigan
- 2011 – 2014: Co-organizer of U. Michigan's Brown Bag Seminar series.

- Spring 2010: Organizer of Harvard’s String Theory Postdoc Journal Club.
- Fall 2006: Graduate rep. on Graduate and Upper Division Course Committee at UC Berkeley.
- 2005 – 2006: Co-Coordinator of Society of Women in the Physical Sciences at UC Berkeley.
- 2005 – 2006: Member of Graduate Student/Faculty Mentor Liaison Committee at UC Berkeley.
- 2002 – 2003: Undergraduate rep. on Undergraduate Study Committee at Stanford University.

Public Talks

- **“Black Holes and Entropy”**
October 2015 lectures at the Niels Bohr Institute as part of the Folke Universitet course “News from the Niels Bohr International Academy.”
- **“Entropy: Quantifying What We Don’t Know”**
February 2013 public talk in Ann Arbor, Michigan in Saturday Morning Physics sequence. Available at <http://lecb.physics.lsa.umich.edu/CWIS/browser.php?ResourceId=4385>

Invited Conference Talks

- **“Spacetime Reconstruction in Non-Relativistic Holography.”**
March 2017: “Applied Newton-Cartan Geometry,” Stonybrook, New York.
- **“Partition Functions via Quasinormal Mode Methods: Spin, Product Spaces, and Boundary Conditions.”**
August 2016: “String Theory in London 2016: Supersymmetry, Geometry, and Holography,” at King’s College London.
September 2016: Cambridge-Mitchell Workshop, at Hereford, England.
December 2016: “7th Joburg Workshop on String Theory”, University of Pretoria, South Africa.
February 2017: “11th Nordic String Theory Meeting”, Hannover, Germany.
- **“Boundary Causality vs Hyperbolicity for Small Black Holes in Gauss-Bonnet.”**
August 2016: “Inward Bound - Conference on Black Holes and Emergent Spacetime”, at Nordita in Stockholm.
- **“A Caveat for Applied Holography.”**
March 2015: “Holographic Methods for Strongly Coupled Systems”, GGI in Arcetri.
March 2016: “10th Nordic String Theory Meeting”, Jacobs University Bremen.
- **“Partition Functions in Even Dimensional AdS via Quasinormal Mode Methods.”**
October 2013: “Black Holes in String Theory”, U. Michigan.
- **“Fluid-Gravity Duality at a Cutoff Surface.”**
May 2012: Mexstrings, UNAM, Mexico City, Mexico.
January 2012: String and Particles Ohio, Cincinnati, Kentucky (SPOCK), Purdue.
August 2011: On Black Holes, Cold Materials, and Hot Nuclei, at ICTP in Trieste, Italy.
- **“From Navier-Stokes to Einstein.”**
February 2011: Strongly Correlated Systems and Gauge/Gravity Duality, in Aspen.

- **“Marginally Relevant Deformations in Lifshitz Holography.”**

February 2010: Poster at Condensed Matter Physics Meets High Energy Physics, IPMU

November 2009: Workshop on Holography and Universality of Black Holes, CHEP, McGill.

- **“Closed String Tachyon Condensation in the E_8 Heterotic System.”**

April 2008: PIMS Pacific Northwest Strings Seminar, UBC, Vancouver.

Research Seminars

Over 60 research seminars given at institutions throughout the US, Canada, and Europe. Recent highlights include:

- **“A Caveat for Applied Holography”**

October 2014: Arizona State University; November 2014: Uppsala University; February 2015: Niels Bohr Institute; May 2015: University of Groningen; November 2015: Max Planck Institute, Potsdam; January 2016: Brandeis University; February 2016: Cambridge DAMTP, Imperial College; November 2016: Israel Joint Seminar; December 2016: University of Michigan.

- **“Partition Functions in Even Dimensional AdS via Quasinormal Mode Methods”**

May 2014: Stanford University; September 2014: Harvard University; November 2014: Durham University; January 2015: Brown University; May 2015: University of Amsterdam; January 2016: McGill, March 2016: ETH Zurich; October 2016: Oxford University, University of Southampton; November 2016: Tel Aviv University; January 2017: University of Illinois Urbana Champaign

Weblink for Publication List

<http://inspirehep.net/search?p=exactauthor%3AC.A.Keeler.1>