

# Åsmund Folkestad

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## WORK

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Sep. 2024 –	<b>Postdoctoral Scholar</b> , UC Davis Researcher at the Center for Quantum Mathematics and Physics (QMAP) with Prof. Veronika Hubeny.
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## EDUCATION

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2018 – 2024	<b>PhD in Theoretical Physics</b> , MIT PhD from the MIT Center for Theoretical Physics. Advisor: Netta Engelhardt. Thesis: <i>From Quantum Information to Cosmic Censorship: Emergent Spacetimes and Their Surfaces</i> . GPA: 5.00/5.00.
2012 – 2018	<b>MSc in Applied Physics and Mathematics</b> , NTNU Undergraduate program leading to a MSc degree. Advisor: Jens O. Andersen. Thesis: <i>Effective Polyakov Loop Modeling of QCD</i> . GPA: 4.87/5.00.
2016 – 2017	<b>Exchange Student</b> , University of Minnesota Fulbright exchange student. GPA: 4.00/4.00

## SCHOLARSHIPS AND AWARDS

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Fall 2022	<b>KITP Graduate Fellow</b> Fellowship awarded to be a visiting graduate student at the Kavli Institute for Theoretical Physics at UC Santa Barbara.
2018 – 2023	<b>Aker Scholarship</b> Scholarship fully funding 3 years of PhD studies.
2018	<b>Best Technology Student at Faculty of Natural Sciences</b> Award for the best MSc student among the 180 graduating students in technology programs at the NTNU Faculty of Natural Sciences.
2016 – 2017	<b>Fulbright Scholarship</b> Fulbright Scholarship for studying in the US the 2016/2017 academic year.
2016 – 2017	<b>Full Scholarship from University of Minnesota</b> Full tuition scholarship and subsistence stipend from University of Minnesota for an academic year.
2016 – 2017	<b>Exchange Study Stipend from NTNU</b> Stipend from NTNU covering expenses for exchange studies.
Spring 2017	<b>Educational Scholarship from Toten Sparebank</b> Scholarship awarded to two students by the bank Toten Sparebank.

## INTERNSHIPS

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June 2017 – Aug. 2017	<b>CERN Cooperation Associate</b> Summer internship to perform numerical simulations for research on radiation damage for the LHCb experiment.
July 2015 – June 2016	<b>CERN Technical Student</b> , Year long internship where I performed simulations of transport equations in silicon detectors for the LHCb experiment.

## PUBLICATIONS

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- [1] Netta Engelhardt et al. “Spoofing Entanglement in Holography.” In: (July 2024). arXiv: [2407.14589](https://arxiv.org/abs/2407.14589) [[hep-th](#)].
  - [2] Netta Engelhardt et al. “Cryptographic Censorship.” In: (Feb. 2024). arXiv: [2402.03425](https://arxiv.org/abs/2402.03425) [[hep-th](#)].
  - [3] Åsmund Folkestad. “Subregion independence in gravity.” In: *JHEP* 05 (2024), p. 300. arXiv: [2311.09403](https://arxiv.org/abs/2311.09403) [[hep-th](#)].
  - [4] Åsmund Folkestad and Aditya Dhumuntarao. “Maximal entangling rates from holography.” In: *Phys. Rev. D* 108.8 (2023), p. 086032. arXiv: [2211.07654](https://arxiv.org/abs/2211.07654) [[hep-th](#)].
  - [5] Åsmund Folkestad. “Penrose Inequality as a Constraint on the Low Energy Limit of Quantum Gravity.” In: *Phys. Rev. Lett.* 130.12 (2023), p. 121501. arXiv: [2209.00013](https://arxiv.org/abs/2209.00013) [[hep-th](#)].
  - [6] Netta Engelhardt and Åsmund Folkestad. “Canonical purification of evaporating black holes.” In: *Phys. Rev. D* 105.8 (2022), p. 086010. arXiv: [2201.08395](https://arxiv.org/abs/2201.08395) [[hep-th](#)].

- [7] Netta Engelhardt and Åsmund Folkestad. “Negative complexity of formation: the compact dimensions strike back.” In: *JHEP* 07 (2022), p. 031. arXiv: [2111.14897 \[hep-th\]](#).
- [8] Netta Engelhardt and Åsmund Folkestad. “General bounds on holographic complexity.” In: *JHEP* 01 (2022), p. 040. arXiv: [2109.06883 \[hep-th\]](#).
- [9] Åsmund Folkestad and Sergio Hernández-Cuenca. “Conformal Rigidity from Focusing.” In: *Classical and Quantum Gravity* (2021). arXiv: [2106.09037 \[gr-qc\]](#).
- [10] Netta Engelhardt and Åsmund Folkestad. “Holography abhors visible trapped surfaces.” In: *JHEP* 07 (2021), p. 066. arXiv: [2012.11445 \[hep-th\]](#).
- [11] Åsmund Folkestad, Sašo Grozdanov, Krishna Rajagopal, and Wilke van der Schee. “Coupling Constant Corrections in a Holographic Model of Heavy Ion Collisions with Nonzero Baryon Number Density.” In: *JHEP* 12 (2019), p. 093. arXiv: [1907.13134 \[hep-th\]](#).
- [12] Åsmund Folkestad and Jens O. Andersen. “Thermodynamics and phase diagrams of Polyakov-loop extended chiral models.” In: *Phys. Rev. D* 99 (2019), p. 054006. arXiv: [1810.10573 \[hep-ph\]](#).
- [13] Kazu Akiba et al. “LHCb VELO Timepix3 Telescope.” In: *JINST* 14.05 (2019), P05026. arXiv: [1902.09755 \[physics.ins-det\]](#).
- [14] Å. Folkestad et al. “Development of a silicon bulk radiation damage model for Sentaurus TCAD.” In: *Nuclear Inst. and Methods in Physics Research A* 874 (2017), pp. 94–102. URL: <http://www.sciencedirect.com/science/article/pii/S0168900217309282>.

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## TALKS

Nov. 2, 2024	Invited conference talk at BASICS 2024
May 14, 2024	Invited seminar at CERN
Feb. 5, 2024	Invited seminar at the Princeton Gravity Initiative
Nov. 6, 2023	Invited seminar at Okinawa Institute of Science and Technology
Sept. 7, 2023	Conference presentation at <i>Quantum Information, Quantum Matter and Quantum Gravity 2024</i> at YITP, Kyoto University
Jul. 18th, 2023	Invited workshop presentation at <i>Gravity - New perspectives from strings and higher dimensions</i> at Centro de Ciencias de Benasque Pedro Pascual
Feb. 8th, 2023	Invited seminar at Caltech
Nov. 18th, 2022	Invited seminar at Stanford
Oct. 25th, 2022	Invited seminar at UC Berkeley
Oct. 14th, 2022	Invited seminar at UC Santa Barbara
Oct. 14th, 2022	Invited seminar at UT Austin
Oct. 11th, 2022	Invited seminar at Harvard
Oct. 4th, 2022	Invited seminar at Brandeis
Aug. 11, 2022	Conference presentation at <i>Fundamental Aspects of Gravity</i> at Imperial College London
Jul. 4, 2022	Invited workshop presentation <i>Reconstructing the Gravitational Hologram with Quantum Information</i> at GGI Florence
Apr. 8, 2022	Invited talk for QuantISED symposium
Feb. 14, 2022	Invited seminar at Harvard Black Hole Initiative
Jan. 18, 2022	Invited seminar at Institute for Research in Fundamental Sciences
Apr. 15, 2021	Invited seminar at University College London
Jan. 6, 2021	Invited seminar at University of Ljubljana
Mar. 27, 2021	Conference presentation at <i>The 37th Jim Isenberg Pacific Coast Gravity Meeting</i>
Apr. 17, 2021	Conference presentation at <i>APS 2021 April Meeting</i>

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## SUMMER SCHOOLS

June 2021	<b>TASI: Black Holes, Quantum Information, and Dualities</b> A month long summer school on theoretical physics at CU Boulder.
July 2016	<b>PSI Summer School on General Relativity</b> Two week summer school on general relativity organized by Petnica Summer Institute.

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## TEACHING EXPERIENCE

Aug. 2014 –	<b>Head Teaching Assistant, NTNU</b>
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Dec. 2014	Head TA a course on complex-, Laplace- and Fourier-analysis.
2013 – 2015	<b>Teaching Assistant</b> , NTNU
2017 – 2018	Exercise instructor in mechanics, quantum mechanics, mathematical methods, and programming.
Summer 2013,	<b>Teacher</b> , Gjøvik University College
2014	Lecturing a summer course on algebra and calculus for 180 incoming students.