Åsmund Folkestad

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Education

Fall 2018 – present	**PhD Candidate in Theoretical Physics**, MIT Fifth year PhD candidate at the MIT Center for Theoretical Physics. Supervisor: Professor Netta Engelhardt. GPA: 4.00.
2012 – 2018	**MSc in Applied Physics and Mathematics**, NTNU Undergraduate program leading to a MSc degree. Supervisor: Professor Jens O. Andersen. Thesis: *Effective Polyakov Loop Modeling of QCD*. GPA: 4.87/5.00.
2016 – 2017	**Exchange Student**, University of Minnesota Fulbright exchange student. GPA: 4.00.

Scholarships and awards

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

Publications

[1] Netta Engelhardt and Åsmund Folkestad. "Canonical purification of evaporating black holes". In: *Phys. Rev. D* 105.8 (2022), p. 086010. arXiv: 2201.08395 [hep-th].

[2] 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].

[3] Netta Engelhardt and Åsmund Folkestad. "General bounds on holographic complexity". In: *JHEP* 01 (2022), p. 040. arXiv: 2109.06883 [hep-th].

[4] Åsmund Folkestad and Sergio Hernández-Cuenca. "Conformal Rigidity from Focusing". In: *Classical and Quantum Gravity* (2021). arXiv: 2106.09037 [gr-qc].

[5] Netta Engelhardt and Åsmund Folkestad. "Holography abhors visible trapped surfaces". In: *JHEP* 07 (2021), p. 066. arXiv: 2012.11445 [hep-th].

[6] 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].

[7] Åsmund Folkestad and Jens O. Andersen. "Thermodynamics and phase diagrams of Polyakov-loop extended chiral models". In: *Phys. Rev.* D99 (2019), p. 054006. arXiv: 1810.10573 [hep-ph].

[8] Kazu Akiba et al. "LHCb VELO Timepix3 Telescope". In: *JINST* 14.05 (2019), P05026. arXiv: 1902.09755 [physics.ins-det].

[9] 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.

Internships, Work and Summer Schools

June 2021	**TASI: Black Holes, Quantum Information, and Dualities** A month long summer school on theoretical physics held remotely by CU Boulder.
June 2017 – Aug. 2017	**Cooperation Associate**, CERN Summer internship to perform research on radiation damage for LHCb. Work involved numerical simulation of transport equations on complex geometries.
July 2016	**PSI Summer School on General Relativity** Nine day summer school on general relativity organized by Petnica Summer Institute.
July 2015 – June 2016	**Technical Student**, CERN A year long internship. Work tasks: perform simulations of transport equations in silicon detectors for the LHCb experiment. Develop a phenomenological silicon radiation damage model.

Talks

Aug. 11, 2022	Presentation at the *Fundamental Aspects of Gravity* conference at Imperial College London
Jul. 4, 2022	Invited talk at the workshop *Reconstructing the Gravitational Hologram with Quantum Information* at GGI
Apr. 8, 2022	Invited talk for QuantISED symposium
Feb. 14, 2022	Invited seminar for Harvard Black Hole Initiative
Jan. 18, 2022	Invited for holography seminar at Institute for Research in Fundamental Sciences
Apr. 15, 2021	Invited seminar for UCL quantum information/quantum gravity group
Jan. 6, 2021	Invited seminar for the University of Ljubljana holography group
Mar. 27, 2021	Presentation at *The 37th Jim Isenberg Pacific Coast Gravity Meeting*
Apr. 17, 2021	Presentation at *APS 2021 April Meeting*

Teaching experience

Aug. 2014 – Dec. 2014	**Head Teaching Assistant**, NTNU Head TA in TMA4120 Calculus 4K, a course on complex, Laplace and Fourier analysis with 400 students. Work tasks: coordinate 12 TAs, create a course webpage and write solutions to exercises and exam in LaTeX.
2013 – 2015 2017 – 2018	**Teaching Assistant**, NTNU Exercise instructor in analytical mechanics, quantum mechanics, mathematical methods, and intro to programming.
Summer 2013, 2014	**Teacher**, Gjøvik University College Lecturing and exercise instruction in a summer course in algebra and basic calculus for 180 beginning engineering students. Work tasks: independently create and hold lectures, create and grade tests.