

# DANIEL LONGENECKER

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## EDUCATION

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<b>Princeton University</b> PhD in Physics • Amplitudes in Quantum Field Theory and String Theory	Princeton, New Jersey <i>2021 - 2027</i>
<b>Cornell University, College of Arts and Sciences</b> Majors in Physics and Physics Education • GPA: 4.14; Physics Major GPA: 4.19 (A+ = 4.3)	Ithaca, New York <i>2016 - 2018, 2020 - 2021</i>
<b>Homeschool</b> High School Diploma	Kuwait City, Kuwait <i>2012-2016</i>

## RESEARCH EXPERIENCE

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<b>PhD Student</b> <i>Princeton University</i> Project: String Amplitudes Supervisor: Nima Arkani-Hamed	2022
<b>Undergraduate Researcher</b> <i>Cornell University</i> Project: Flux Vacua in String Theory via Mathematical Linguistics Supervisor: Liam McAllister	2019-2021
<b>Undergraduate Researcher</b> <i>Cornell University</i> Project: Dynamics of Cold Atom Solitons Supervisor: Erich Mueller	2017-2019

## PUBLICATIONS

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<b>Peer-Reviewed</b> • D. Longenecker and E.J. Mueller, “Collective Dynamics and Atom Loss in Bright-Soliton Matter Waves”. <i>Phys. Rev. A</i> <b>99</b> , 053618 (May 2019).
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## AWARDS, HONORS & FELLOWSHIPS

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• Frances Lane Fellowship in Mathematics or Physics, Princeton	2023
• Hertz Foundation Fellowship	2022
• Joseph Henry Merit Award, Princeton Physics Department	2021
• Stanford Graduate Fellowship, declined	2021
• James Mills Pierce Fellowship, Harvard Physics, declined	2021
• LeRoy Apker Award, Finalist	2021
• Kieval Prize, Cornell Physics Department	2021
• Goldwater Scholarship, Honorable Mention	2019
• College Scholar, Cornell University	2019
• Putnam Exam, Top 250 as a freshman	2017
• Freshman Prize Exam, Co-winner, Cornell Math Department	2017
• U.S. Physics Team Member, first and only attempt	2016

## TEACHING EXPERIENCE & SCIENTIFIC OUTREACH

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- Math Club Teacher, Princeton Middle School 2022
- Graduate Mentor, Princeton Physics Department 2021-2022
- Capstone Project, College Scholar Major in Physics Education, Cornell University 2021
  - Created and taught a course on physics problem solving.
- Undergraduate Teaching Assistant, Cornell Physics Department 2017-2018
- Volunteer Tutoring: Lydia, Firas, Luaidh, Cian, Oscar, Gabriella, Jedediah, Isabel, Mustafa, and Hamodat 2016-2021

## WORKSHOPS/CONFERENCES

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- *Amplituhedron at 10*, DIAS, Dublin, Ireland 2023
- *String Amplitudes at Finite  $\alpha'$* , IAS, Princeton, NJ, USA 2023
- *Workshop on Spacetime and Quantum Information*, IAS, Princeton, NJ, USA 2022
- *Possible and Impossible in Effective Field Theory: From the S-Matrix to the Swampland*, IAS, Princeton, NJ, USA 2022
- *Workshop on Nonlinear Algebra and Combinatorics from Physics*, CMSA-Harvard, Cambridge, MA, USA 2022
- *Workshop on Quantum Information and Spacetime*, IAS, Princeton, NJ, USA 2021
- *Summer Program for Undergraduates in Theoretical Physics*, Perimeter Institute, Waterloo, Canada 2020