

Scott Perkins

Curriculum Vitae

257 Loomis Laboratory - University of Illinois at Urbana-Champaign
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USA

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EDUCATION

- 2019–2022 **Ph.D.**, *University of Illinois at Urbana-Champaign*, Urbana IL, 4.0/4.0.
Thesis Advisor: Dr. Nicolás Yunes
- 2017–2019 **M.Sc.**, *Montana State University*, Bozeman MT, 3.84/4.0.
- 2013–2017 **B.S.**, *Texas A&M University*, College Station TX, 3.97/4.0.

RESEARCH INTERESTS

- Fundamental Physics
 - Estimations of future constraints on extensions to GR through synthetic simulations of sources
 - Current constraints on modified theories of gravity through LIGO/Virgo data
- Gravitational Wave Modeling
 - Modeling gravitational waves from eccentric binaries

EXPERIENCE

Academic Research

- 2019– **Graduate Research Assistant**, *University of Illinois at Urbana-Champaign*.
Alternating semesters
Advisor: Dr. Nicolás Yunes
- 2017–2019 **Graduate Research Assistant**, *Montana State University*.
Alternating semesters
Advisor: Dr. Nicolás Yunes
- 2015–2017 **Undergraduate Research Assistant**, *Texas A&M University*.
Advisor: Dr. Casey Papovich

Teaching

- 2020– **Graduate Teaching Assistant**, *University of Illinois at Urbana-Champaign*.
Alternating semesters
 - Senior Physics Laboratory (Undergraduate)
 - General Relativity I (Graduate)
- 2017–2019 **Graduate Teaching Assistant**, *Montana State University*.
Alternating semesters
 - Calculus-based Classical Mechanics (Undergraduate)
 - Modern Physics (Undergraduate)
 - Solar System Astronomy (Undergraduate)

REFEREED JOURNAL PUBLICATIONS

1. Scott E. Perkins, Nicolás Yunes, and Emanuele Berti. Probing Fundamental Physics with Gravitational Waves: The Next Generation. *Phys. Rev. D*, 103(4):044024, 2021

2. Remya Nair, Scott Perkins, Hector O. Silva, and Nicolás Yunes. Fundamental physics implications for higher-curvature theories from binary black hole signals in the ligo-virgo catalog gwtc-1. *Phys. Rev. Lett.*, 123:191101, Nov 2019
3. Scott Ellis Perkins and Nicolas Yunes. Probing screening and the graviton mass with gravitational waves. *Classical and Quantum Gravity*, 2019

WORKS SUBMITTED FOR REVIEW

1. Scott E. Perkins, Remya Nair, Hector O. Silva, and Nicolás Yunes. Improved gravitational-wave constraints on higher-order curvature theories of gravity. 4 2021

CONFERENCE TALKS

1. *April APS Meeting*, Probing Fundamental Physics with Gravitational Waves: The Next Generation, 2021
2. *Monthly Cosmic Explorer Consortium Meeting*, Future Tests of Fundamental Physics with GW, 2021. CE-G2100006-v1
3. *First Cosmic Explorer Meeting*, Fundamental Physics Panelist, 2020
4. *April APS Meeting*, Probing Screening and the Graviton Mass with Gravitational Waves, 2019

TECHNICAL SKILLS

Programming ◦ Proficient: Python, C++/C
Languages ◦ Familiar: CUDA, Java, HTML, CSS

Auxiliary ◦ Proficient: Mathematica, Latex, Linux, MacOS, OpenMP
Software and ◦ Familiar: Windows
Operating
Systems

AWARDS AND ACHIEVEMENTS

- 2021 **Scott Anderson Award**, *University of Illinois at Urbana-Champaign*.
- 2019 **Graduate Research Fellowship**, *University of Illinois at Urbana-Champaign*.
- 2017 **Graduate Meritorious Award**, *Montana State University*.
- 2017 **Faculty's Student Achievement Award**, *Texas A&M University*.
- 2017 **Randall C. Shepard Award in Astrophysics**, *Texas A&M University*.
- 2013–2017 **President's Endowed Scholarship**, *Texas A&M University*.
- 2013–2017 **Rose Lafferty Scholarship**, *St. Andrew's Episcopal Church*.
- 2013 **National Merit Finalist**, *Texas A&M University*.
- 2012 **Eagle Scout**, *Boy Scouts of America*.

MEMBERSHIPS

- 2020– **Cosmic Explorer Consortium**, *Member*.
- 2019– **LISA Consortium**, *Associate Member*.
- 2018– **American Physical Society**, *Member*.
- 2018–2019 **eXtreme Gravity Institute (XGI) at Montana State**, *Member*.

OUTREACH ACTIVITIES

- 2019 **Peaks and Potentials Youth Camp Course Intstructor**, *Montana State University*.
- 2018–2019 **XGI Outreach Volunteer**, *Montana State University*.
- 2015–2016 **Physics Festival Volunteer**, *Texas A&M University*.