

GRANT C. WELDON

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EDUCATION

B.S. Honors Physics, Mathematics , University of Michigan <i>Concentration in Mathematical Physics</i>	2017 - 2021 <i>Ann Arbor, MI</i>
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RESEARCH INTERESTS

High-Energy Astrophysics, General Relativity, Gravitational Waves, Cosmology

RESEARCH EXPERIENCE

University of Michigan LIGO SCIENTIFIC COLLABORATION - MICHIGAN GRAVITATIONAL WAVE GROUP <i>Undergraduate Researcher</i> with Professor Keith Riles	April 2018 - Present <i>Ann Arbor, MI</i>
· Gravitational wave astrophysics, computational methods, and Advanced LIGO data analysis · Searches for continuous waves emitted by non-axisymmetric, rapidly spinning neutron stars	
Istituto Nazionale di Fisica Nucleare (INFN) DEPARTMENT OF ENERGY - INFN EXCHANGE, VIRGO COLLABORATION <i>Undergraduate Researcher</i> with Professor Viviana Fafone and Dr. Elisabetta Cesarini	June 2019 - July 2019 <i>Rome, Italy</i>
· Optical coating metrology for thermal noise reduction in gravitational wave interferometers	

HONORS & AWARDS

· Sophomore Honors Award with Distinction , University of Michigan LSA Honors Program	2019
· William J. Branstrom Freshman Prize , University of Michigan	2018
· Dr. Sidney J. and Irene Shipman Scholarship , University of Michigan (full tuition, four year merit scholarship)	2017 - 2021
· Regents Merit Scholarship , University of Michigan	2017
· National Merit Scholarship Finalist	2017

PUBLICATIONS

· B. P. Abbott, *et al.* (including **G. Weldon**), *All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data*, [Phys. Rev. D **100**, 024004 \[arXiv:1903.01901\]](#) (2019)

PRESENTATIONS

[* denotes presenter]

· D. Lumaca*, *et al.* (including **G. Weldon**), *Stability of Low Loss Substrates for Coating Research: From Edge Effect to Ageing*, 13th Amaldi Conference on Gravitational Waves, Valencia, Spain (July 2019)

· **G. Weldon***, K. Riles, *Strain Histograms for Evaluating Continuous Gravitational Wave Candidates*, American Physical Society Meeting, Denver, Colorado (April 2019)

· **G. Weldon***, *Continuous Gravitational Wave Simulations*, Society of Physics Students Talk, University of Michigan (November 2018)

ORGANIZATIONS

Society of Physics Students (SPS) , University of Michigan <i>Vice President</i> (2019 - 2020), <i>Outreach Chair</i> (2018 - 2019)	2017 - Present
American Physical Society (APS)	2017 - Present
Shipman Scholarship Society , University of Michigan	2017 - Present
Honors Program (College of LSA) , University of Michigan	2017 - Present

OUTREACH

SPS Biweekly Meeting Speaker Series <i>Coordinator</i>	2019 - 2020 <i>Ann Arbor, MI</i>
Michigan Science Center - Physics Demo Day <i>Volunteer</i> with SPS (<i>Coordinator</i> in 2019)	2018 - Present <i>Detroit, MI</i>
Ann Arbor Hands-On Museum - Physics Palooza <i>Volunteer</i> with SPS (<i>Coordinator</i> in 2019)	2018 - Present <i>Ann Arbor, MI</i>
Burns Park Elementary School - Physics Night <i>Volunteer</i> with SPS	2017 <i>Ann Arbor, MI</i>

RELEVANT COURSEWORK

[* denotes Fall 2019 enrollment]

Physics

- General Relativity (Graduate)*
- High-Energy Astrophysics
- Quantum Mechanics*
- Classical Mechanics
- Modern Physics & Lab
- Honors Physics Sequence

Mathematics

- Probability*
- Linear Algebra
- Honors Differential Equations
- Honors Applied Calculus Sequence

TECHNICAL KNOWLEDGE

Python, C, MATLAB, Linux/Unix, Bash, Shell scripting, HTML, L^AT_EX, Excel