

GRANT C. WELDON

gcweldon@umich.edu · <https://umich.edu/~gcweldon>

EDUCATION

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

RESEARCH INTERESTS

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

RESEARCH EXPERIENCE

University of Michigan LIGO SCIENTIFIC COLLABORATION - MICHIGAN GRAVITATIONAL WAVE GROUP <i>Advisor:</i> Prof. 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>Advisors:</i> Prof. 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](https://arxiv.org/abs/1903.01901)] (2019)

PRESENTATIONS

-
- D. Lumaca (presenter), *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

Physics

- General Relativity (Graduate)*
- High-Energy Astrophysics
- Quantum Mechanics*
- Classical Mechanics

Mathematics

- Probability*
- Linear Algebra
- Honors Differential Equations

[* denotes Fall 2019 enrollment]

TECHNICAL KNOWLEDGE

Python, MATLAB, Linux/Unix, Bash, HTML, L^AT_EX