

# Katelyn J. Wagner

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EDUCATION	<b>Rochester Institute of Technology</b> Ph.D. Astrophysical Sciences and Technology	<b>Anticipated 2025</b>
	<b>Roberts Wesleyan College</b> B.S. Physics (GPA: 3.81/4.00) <ul style="list-style-type: none"><li>• Magna Cum Laude, Global Honors</li></ul>	<b>May 2020</b>
	<b>University of Rochester</b> <i>Cross-registered for courses in astronomy</i>	<b>Fall 2017 - Spring 2019</b>
	<b>Rochester Institute of Technology</b> <i>Cross-registered for courses in mathematics</i>	<b>Spring 2018</b>
RESEARCH EXPERIENCE	<b>Rochester Institute of Technology</b> <i>Advisor: Dr. John Whelan</i>	<b>May 2019 - Current</b>
	Explored the application of the lattice covering problem to template placement in the cross-correlation search for continuous gravitational waves from LMXB Scorpius X-1. This is significant for our tunable search over a four-dimensional parameter space as both sensitivity and computational cost scale with template number.	
	<b>University of Rochester</b> <i>Advisor: Dr. Alice Quillen</i>	<b>May 2018 - January 2019</b>
	Worked with Dr. Quillen's modified version of Rebound to run N-body simulations of a single asteroid undergoing non-principal axis rotation with simulated homogeneous viscoelastic Kelvin-Voigt rheology to determine if our measurements for energy dissipation matched previous estimates using other models.	
	<b>Roberts Wesleyan College</b> <i>Advisor: Mr. Martin Pepe</i>	<b>October 2017 - April 2018</b>
	Categorized LNAs to find pairs of detectors with similar signal-to-noise ratios to eventually be used in small radio interferometers.	
PRESENTATIONS	RIT AST Graduate Research Jamboree - October 2020 <i>Improved Lattice and Coordinate Choices for a Search for Continuous Gravitational Waves from Sco X-1</i>	
	LIGO-Virgo-KAGRA Collaboration Meeting - September 2020 <i>Improved Lattice and Coordinate Choices for Cross-Correlation Search for Sco X-1</i>	
	LIGO Continuous Wave Group Telecon - September 2020 <i>Full O3 Scorpius X-1 CrossCorr Update</i>	
	RIT Undergraduate Research Symposium - August 2019 <i>Template Placement for a Search for Continuous Gravitational Waves</i>	
	UR Summer Research Symposium - August 2018 <i>Simulations of Precession Damping for a Homogeneous Viscoelastic Rotator</i>	

PUBLICATIONS	<p><b>Simulations of wobble damping in viscoelastic rotators</b> (Quillen, <b>Wagner</b> and Sánchez)  Mon. Not. R. Astron. Soc. <b>485</b>, 725–738 (2019) arXiv:1901.01439</p>
PROFESSIONAL AFFILIATIONS	<p>LIGO Scientific Collaboration  Sigma Pi Sigma</p>
HONORS AND AWARDS	<p>Sigma Pi Sigma Honor Society (SPS)  Chi Alpha Sigma Honor Society  Benjamin Titus Roberts Full-tuition Grant - <i>Roberts Wesleyan College</i>  Ensemble Scholarship, Violin - <i>Roberts Wesleyan College</i>  Dean's List, High Honors - <i>Roberts Wesleyan College</i></p>
COMPUTER SKILLS	<p>Computer Programming and Data Analysis:</p> <ul style="list-style-type: none"> <li>• Python, Maple</li> <li>• UNIX shell scripting (Bash)</li> </ul> <p>Document Editing and Development Tools:</p> <ul style="list-style-type: none"> <li>• L<sup>A</sup>T<sub>E</sub>X</li> <li>• Git (GitHub, GitLab) - moderate experience</li> <li>• Microsoft Office Suite, Google Suite</li> <li>• Data Analysis: Matplotlib, Pandas</li> </ul> <p>Operating Systems:</p> <ul style="list-style-type: none"> <li>• Linux-Debian (primary), Windows, Unix (Mac OS X)</li> </ul> <p>Technical Skills:</p> <ul style="list-style-type: none"> <li>• Trained to operate the 24-inch computerized Cassegrain telescope at the University of Rochester's C.E.K. Mees Observatory</li> </ul>
PROFESSIONAL DEVELOPMENT	<p>Data Carpentry: Pilot Workshop for Astronomers - November 2020</p>
TEACHING EXPERIENCE	<p><b>Roberts Wesleyan College</b> Teaching Assistant</p> <ul style="list-style-type: none"> <li>• AST 201: Descriptive Astronomy</li> <li>• PHY 101 LAB: Mechanics</li> <li>• PHY 102 LAB: Electricity</li> <li>• PHY 115: Physics of Music</li> </ul> <p>Tutoring (Certified CRLA Level 1)</p> <ul style="list-style-type: none"> <li>• Introductory Physics sequence (I, II, and III), Calculus sequence (I, II, and III), Descriptive Astronomy, Statistics, Linear Algebra</li> </ul>
LEADERSHIP & SERVICE	<p><b>C.E.K. Mees Observatory</b>, Naples, NY</p> <p>Student Tour Guide <span style="float: right;"><b>Summer 2018</b></span>  Present history of the observatory and general introductory astronomy information, as well operate 24-inch computerized Cassegrain telescope to show a variety of astronomical objects to the public tour.</p> <p><b>Roberts Wesleyan College</b>  President, <i>Society of Physics Students</i> <span style="float: right;"><b>2018 Academic Year</b></span>  Organizing preview day for prospective students, fundraising, planning activities</p>

**Women's Varsity Soccer Team**

Roberts Wesleyan College

NCAA Division II, starting defensive midfielder

**Fall 2016 - Spring 2020**