

Humberto B. Gilmer

CONTACT INFORMATION	191 West Woodruff Avenue Columbus, OH, 43210	mobile: (281)-796-4317 website: hbgilmer.github.io e-mail: gilmer.30@osu.edu
RESEARCH INTERESTS	Particle physics, Physics beyond the Standard Model, Supersymmetry	
EDUCATION	The Ohio State University , Columbus, OH, USA	
	<i>Doctor of Philosophy, Physics</i>	May 2017 – present
	<ul style="list-style-type: none">• Advisor: Linda M. Carpenter	
	<i>Master of Science, Physics</i>	August 2014 – May 2017
	<ul style="list-style-type: none">• APS Bridge Program Fellow• Advisor: Linda M. Carpenter	
	Rice University , Houston, TX, USA	
	<i>Bachelor of Science, Physics</i>	August 2010 – May 2014
	<ul style="list-style-type: none">• Advisor: M.D. Corcoran	
HONORS AND AWARDS	The Ohio State University , Columbus, OH, USA	
	<i>Graduate Student Award for Mentoring Excellence</i> College of Arts and Sciences	April 2020
	<i>Graduate Teaching Assistant Award</i> Department of Physics	April 2017
	<i>APS Bridge Program Fellowship</i>	May 2014
SELECTED PUBLICATIONS	Linda M. Carpenter, Humberto B. Gilmer, Junichiro Kawamura “New Bounds on Light Sneutrino Masses”, arXiv:2007.10360	
RESEARCH EXPERIENCE	The Ohio State University , Columbus, OH	
	<i>Research assistant</i>	May 2016 – present
	<ul style="list-style-type: none">• Doctoral research in high energy particle physics, concentrating on model building for physics beyond the Standard Model• Supervisor: Linda M. Carpenter	
	University of Chicago , Chicago, IL	
	<i>Research assistant</i>	June – August 2013
	<ul style="list-style-type: none">• Physics/MRSEC REU, sponsored by the National Science Foundation• Wrote program capable of extracting a gravitationally-lensed galaxy from a field; performed numerical analysis to determine illumination variances across different frequency filters.• Supervisor: Michael D. Gladders	
	MD Anderson Cancer Center , Houston, TX	
	<i>Research assistant, Department of Radiation Oncology</i>	June – August 2012
	<ul style="list-style-type: none">• Assisted in image analysis of irradiated films. Gained experience and knowledge regarding radiation processes and experimental procedure, as well as practice in use of MATLAB.• Wrote MATLAB code to process data from Monte Carlo data simulation, involving data filtering and analysis, as well as understanding radiation of charged particles.• Supervisors: Uwe Titt, Luis A. Perles	
PROGRAMMING	Python, Mathematica, L ^A T _E X, METAPOST, C/C++, MATLAB	

TEACHING

The Ohio State University, Columbus, OH*Tutor, Physics 7701, 7401***AU17–present**

Lead weekly 1.5 hour tutorial sessions for Bridge students and other graduate students for graduate-level introductory electrodynamics course; duties included developing and writing tutorial questions, fielding student questions and leading review sessions before exams.

*Teaching assistant, Physics 1250, 1251***AU15 – SP17, AU19**

Lead weekly 50 minute recitation and 2 hour lab sessions for two classes of 25 undergraduates; duties ranged from providing instruction of concepts and problem solving skills, to classroom management and grading. Concepts covered included Newtonian mechanics, energy conservation, fluid dynamics, thermodynamics, special relativity, electrostatics, waves & optics, and basic quantum mechanics.

CONFERENCES &
SUMMER SCHOOLS*ICHEP***August 2020**

Virtual conference

*CTEQ Summer School***July 2019**

University of Pittsburgh

*Towards the Next Quantum Field Theory of Nature Summer School***July–August 2018**

Mainz Institute for Theoretical Physics

*Phenomenology Symposium***May 2018, May 2019**

University of Pittsburgh

*Prospects in Theoretical Physics – Particle Physics at the LHC and Beyond***July 2017**

IAS

*TeVPA***August 2017**

The Ohio State University

SERVICE &
OTHER
ACTIVITIES**The Ohio State University**, Columbus, OH*Polaris***May 2017 – present**

- Founding member of graduate-undergraduate student collaborative in Departments of Physics and Astronomy dedicated to improving retention of historically-underrepresented minorities in STEM
- Drafted extensive proposals for mentorship programming, including a year-long course and summer program

*Graduate Studies Committee***August 2017 – August 2020**

- Served as one of three elected graduate student representatives.
- Provided student input on affairs pertaining to graduate education, including external review, curriculum review and the qualifying process.
- Involved with extensive restructuring of graduate education

*Bridge Program Representative***Spring 2015 – August 2017**

- Assisted in selection of incoming Bridge Fellows for the 2015-2016 and 2016-2017 academic years, involving attendance at regular meetings
- Provided guidance and housing for new incoming students to ease transition to graduate school life

*Young Scholars' Program***August 2016, 2017, 2018**

- Provided intensive introductory physics instruction with 25 incoming freshmen from disadvantaged backgrounds in order to acclimate them to a college environment
- Developed brief lectures to demonstrate basic concepts in mechanics