

Education

2018	Ph.D. in Physics and Astronomy Thesis: Simulating Binary Populations in the Milky Way	Northwestern University
2015	M.S. in Physics and Astronomy	Northwestern University
2012	B.S. in Physics with Professional Emphasis, Cum Laude	Utah State University

Honors & Awards

2019	Jeffrey L. Bishop Fellowship Bi-annually awarded to CITA postdoc: \$3,000
2018	CITA Fellowship 3 year postdoctoral fellowship
2017	Blue Apple Award Best student talk at the 27th Midwest Relativity Meeting
2017	NSF GK-12 ‘Reach for the Stars’ Fellowship Graduate Teaching Fellowship
2017	Chambliss Astronomy Achievement Award Honorable Mention, 229th AAS Meeting
2016	Northwestern Physics & Astronomy Rapid Fire Research 2nd Place
2014	Illinois Space Grant Consortium Graduate Fellowship Award Amount: \$10,000
2010	Undergraduate Teaching Fellowship Utah State University
2010	Undergraduate Research and Creative Opportunities (URCO) Grant Award Amount: \$2,000
2008	Presidential Fellowship - 4 years Utah State University

Publications

Refereed: 10 total; 1st author: 4, 2nd/3rd author: 4, Nth author: 2

Eclipses of continuous gravitational waves as a probe of stellar structure	<i>submitted to PRD</i>
MARCHANT, P., Breivik, K. , LARSON, S. L., MANDEL, I., BERRY, C. P. L.	
Weighing the Darkness: Astrometric Mass Measurement of Hidden Stellar Companions using Gaia	<i>accepted in ApJ</i>
ANDREWS, J. J., Breivik, K. , CHATTERJEE, S.,	
The Fate of Binaries in the Galactic Center: The Mundane and the Exotic	2019, <i>ApJ</i> , 878, 58S
STEPHAN, A. P., NAOZ, S., GHEZ, A. MA., MORRIS, M. R., CIURLO, A., DO, T., Breivik, K. + 3 CO-AUTHORS	<i>arXiv:1903.00010</i>
Constraining black hole formation with 2M0521	2019, <i>ApJ</i> , 878L, 4B
Breivik, K. , CHATTERJEE, S., ANDREWS, J. J.	<i>arXiv:1810.08206</i>
Post-Newtonian dynamics in dense star clusters: BBHs in the LISA band	2019, <i>Phys. Rev. D</i> 99, 063003
KREMER, K., RODRIGUEZ, C. L., AMARO-SEOANE, P., Breivik, K. + 7 CO-AUTHORS	<i>arXiv:1802.05661</i>
LISA sources in Milky Way globular clusters	2018, <i>Phys. Rev. Lett.</i> 120, 191103
KREMER, K., CHATTERJEE, S., Breivik, K. , RODRIGUEZ, C. L., LARSON, S. L., RASIO, F. A.	<i>arXiv:1802.05661</i>
Characterizing double white dwarf binaries with LISA and Gaia	2018, <i>ApJ</i> , 854L 1B
Breivik, K. , KREMER, K., BUENO, M., LARSON, S. L., COUGHLIN, S. KALOGERA, V.	<i>arXiv:1710.08370</i>
Revealing black holes with Gaia	2017, <i>ApJ</i> , 850L, 13B
Breivik, K. , CHATTERJEE, S., LARSON, S. L.	<i>arXiv:1710.04657</i>
Accreting double white dwarf binaries: implications for LISA	2017, <i>ApJ</i> , 846, 2
KREMER, K., Breivik, K. , LARSON, S. L., KALOGERA, V.	<i>arXiv:1707.01110</i>
Distinguishing between formation channels for binary black holes with LISA	2016, <i>ApJ</i> , 830L, 18B
Breivik, K. , RODRIGUEZ, C. L., LARSON, S. L., KALOGERA, V., RASIO, F. A.	<i>arXiv: 1606.0955</i>

White papers: 5 total, 1 co-lead

The Missing Link in Gravitational-Wave Astronomy: Discoveries waiting in the decihertz range	
ARCA SEDDA, M., ET AL. (INCL. Breivik, K.)	<i>arxiv: 1908.11375</i>
Populations of Black Holes in Binaries	
MACCARONE, T. J., ET AL., (INCL Breivik, K.)	<i>arxiv: 1904.11842</i>

Gravitational Wave Survey of Galactic Ultra Compact Binaries

LITTENBERG, T. B., Breivik, K., ET AL.

arxiv: 1903.05583

Stellar multiplicity: an interdisciplinary nexus

Breivik, K., PRICE-WHELAN, A. M., D'ORAZIO, D. J., HOGG, D. W. ET AL.

arxiv: 1903.05094

Multimessenger science opportunities with mHz gravitational waves

BAKER, J., ET AL. (INCL. Breivik, K.)

arxiv: 1903.04417

Selected Seminars/Colloquia: 11 Total

Oct 2019	Carnegie Observatories Colloquium	Pasadena, CA
Oct 2019	University of Pittsburgh CMU/Pitt Astro Seminar	Pittsburg, PA
Apr 2019	CfA Harvard & Smithsonian Galaxies and Cosmology Seminar	Cambridge, MA
Jun 2018	NASA GSFC Astrophysics Colloquium	Greenbelt, MA
Nov 2017	Columbia Astro Seminar	New York City, NY
Nov 2017	AMNH Astro Seminar	New York City, NY

Selected Conferences and Workshops: 4 Invited, 15 Contributed

July 2019	Beginnings and Ends of Double White Dwarfs Invited talk/workshop	DARK Institute, NBI
Dec 2018	Future by the Future Workshop Invited talk	Columbia University
Oct 2018	2nd COFI Workshop on GWs Invited talk	COFI, Puerto Rico
Jan 2018	The architecture of LISA Science Analysis: Imagining the Future Workshop participant	Keck Institute
Oct 2017	27th Midwest Relativity Meeting talk; Blue Apple award	Ann Arbor, MI
Jan 2017	AAS 229 Poster, Chambliss Honorable mention	Grapevine, TX

Mentoring

Julianne Cronin

SIMULATING POPULATIONS OF OVER-CONTACT M DWARF BINARIES OBSERVABLE BY LISA

Undergrad research; 2017-2018

Current student at Northwestern

Amia Ross

SIMULATING POPULATIONS OF DOUBLE NEUTRON STAR BINARIES OBSERVABLE BY LISA AND LIGO

High school intern; Summer 2017

Attending Harvard in Fall 2018

Michael Bueno

SIMULATING POPULATIONS OF DOUBLE WHITE DWARF BINARIES OBSERVABLE BY LISA AND GAIA; ARXIV:1710.08370

REU student; Summer 2016

Attending Northwestern in Fall 2018

Teaching Experience

Guest Lectures

UNIVERSITY OF TORONTO (ST GEORGE AND SCARBOROUGH)

- Jun 19, 2019: GWs 101 (Summer undergrad research program Astro 101)
- Jan 29, 2019: Introduction to gravitational waves and their detection for upper division undergraduate laboratory course (PHYC 11H3)

NORTHWESTERN UNIVERSITY

- May 25, 2017: Introduction to gravitational waves for upper division undergraduate astronomy course (Astron 331)
- Nov 11, 2016: Overview of the atomic model for introductory, concept-based physics course (Phys 103)

NSF GK-12 Graduate Teaching Fellow

2017-2018

NORTHWESTERN/LAKE VIEW HIGH SCHOOL

Created lesson plans on Kepler's Laws designed to bring computational thinking and current astrophysics research to high school classrooms.

Graduate Teaching Assistant

2012 - 2013

UNIVERSITY OF GEORGIA

- Phys 1252: Introductory Physics for Engineers
- Astr 1010: Introductory Astronomy

Undergraduate Teaching Assistant: General Physics and Astronomy Labs

2010 - 2012

UTAH STATE UNIVERSITY

- Phys 2110/2120: Introductory Physics for Life Sciences
- Phys 1040: Introductory Astronomy
- Observatory operator and lab facilitator

Service and Outreach

Referee for ApJ, ApJL, MNRAS

CITA Blackboard Seminar

CO-ORGANIZER

CITA

Sep 2018 - present

CIERA Astronomer Evenings

Dearborn Observatory

FOUNDER AND LEAD ORGANIZER 2016-2018

Jan 2016 - Aug 2018

Astronomy on Tap - Chicago

Chicagoland area, IL

FOUNDING MEMBER AND PRESENTER

March 2016 - Aug 2018

Physics & Astronomy Graduate Student Council

Evanston, IL

FOUNDING MEMBER, ASTRONOMY OUTREACH COMMITTEE HEAD

Dec 2015 - Aug 2018

Astronomy Conversations

Adler Planetarium

MONTHLY VISIT TO ADLER'S SPACE VISUALIZATION LAB FOR CONVERSATIONS WITH PLANETARIUM VISITORS

March 2016 - Aug 2018

General Science Outreach and Education

PARTICIPANT

2010-Present

- I'm committed to sharing the work that I do with the public and have interacted with over 1500 people at more than 15 events across the Greater Toronto, Greater Chicagoland, and Salt Lake City areas; I'm happy to provide a detailed list of my public outreach activities on request