

Education

| 2018 | Ph.D. in Physics and Astronomy Advisor: Shane L. Larson | Northwestern University |
|------|---------------------------------------------------------|-------------------------|
| 2015 | M.S. in Physics and Astronomy Advisor: Shane L. Larson | Northwestern University |
| 2012 | B.S. in Physics with Professional Emphasis, Cum Laude | Utah State University |

Publications _____

First author

| Constraining black hole formation with 2M0521 | 2019, ApJ, 878L, 4B |
|------------------------------------------------------------------------------|----------------------|
| Breivik, K., Chatterjee, S., Andrews, J. J. | arXiv:1810.08206 |
| Characterizing double white dwarf binaries with LISA and Gaia | 2018, ApJ, 854L 1B |
| Breivik, K., Kremer, K., Bueno, M., Larson, S. L., Coughlin, S. Kalogera, V. | arXiv:1710.08370 |
| Revealing black holes with Gaia | 2017, ApJ, 850L, 13B |
| Breivik, K., Chatterjee, S., Larson, S. L. | arXiv:1710.04657 |
| Distinguishing between formation channels for binary black holes with LISA | 2016, ApJ, 830L, 18B |
| Breivik, K., Rodriguez, C. L., Larson, S. L., Kalogera, V., Rasio, F. A. | arXiv: 1606.0955 |

to be submitted to PRD

submitted to ApJ

Second/third author

Eclipses of continuous gravitational waves as a probe of stellar structure

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**

Andrews, J. J., **Breivik, K.**, Chatterjee, S.,

| LISA sources in Milky Way globular clusters | 2018, Phys. Rev. Lett. 120, 191103 |
|-------------------------------------------------------------------------------------------------|------------------------------------|
| Kremer, K., Chatterjee, S., Breivik, K. , Rodriguez, C. L., Larson, S. L., Rasio, .F. A. | arXiv:1802.05661 |
| Accreting double white dwarf binaries: implications for LISA | 2017, ApJ, 846, 2 |
| Kremer, K., Breivik, K. , Larson, S. L., Kalogera, V. | arXiv:1707.0110 |

Nth author

| The Fate of Binaries in the Galactic Center: The Mundane and the Exotic | 2019, ApJ, 878, 58S |
|--------------------------------------------------------------------------------------------------------------|-------------------------------|
| Stephan, A. P., Naoz, S., Ghez, A. Ma., Morris, M. R., Ciurlo, A., Do, T., Breivik, K. + 3 co-authors | arXiv:1903.00010 |
| Post-Newtonian dynamics in dense star clusters: BBHs in the LISA band | 2019, Phys. Rev. D 99, 063003 |
| Kremer, K., Rodriguez, C. L., Amaro-Seoane, P., Breivik, K. + 7 co-authors | arXiv:1802.05661 |

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 |

Seminars/Colloquia

| Oct 2019 | Carnegie Observatories Colloquium | Pasadena, CA |
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| Oct 2019 | University of Pittsburgh CMU/Pitt Astro Seminar | Pittsburg, PA |
| Apr 2019 | MIT LIGO Lab LIGO Lab Seminar | Cambridge, MA |
| Apr 2019 | CfA Harvard & Smithsonian Galaxies and Cosmology Seminar | Cambridge, MA |
| Feb 2019 | TIFR TIFR DAA Special Seminar | Colaba, Mumbai, IN |
| Jun 2018 | NASA GSFC Astrophysics Colloquium | Greenbelt, MA |
| Mar 2018 | NASA MSFC Astrophysics Seminar | Huntsville, AL |
| Dec 2017 | Caltech TAPIR Seminar | Pasadena, CA |
| Nov 2017 | Columbia Astro Seminar | New York City, NY |
| Nov 2017 | AMNH Astro Seminar | New York City, NY |
| Jun 2017 | UW Milwaukee CGCA Seminar | Milwaukee, WI |
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Conferences and Workshops: 4 Invited, 15 Contributed _____

| Feb 2019 Astrophysics with GW Populations Talk Jan 2019 AAS 233 Talk Dec 2018 Future by the Future Workshop Invited talk Oct 2018 2nd COFI Workshop on GWs Invited talk Oct 2018 28th Midwest Relativity Meeting Talk June 2018 MODEST-18 Talk Jan 2018 The architecture of LISA Science Analysis: Imagining the Future Workshop participant Jan 2018 NASA GW SIG Meeting, 231st AAS Meeting Invited talk Aspen Center for Physic Seattle, V Columbia Universit COFI, Puerto Ric Santorini, C Santorini, C Keck Institut National Harbor, M AAS 231 Dissertation talk | BI |
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| Dec 2018Future by the Future Workshop Invited talkColumbia UniversityOct 20182nd COFI Workshop on GWs Invited talkCOFI, Puerto RicOct 201828th Midwest Relativity Meeting TalkMilwaukee, Invited talkJune 2018MODEST-18 TalkSantorini, ControlJan 2018The architecture of LISA Science Analysis: Imagining the Future Workshop participantKeck InstitutJan 2018NASA GW SIG Meeting, 231st AAS Meeting Invited talkNational Harbor, Mational Harbor, Ma | CS |
| Oct 20182nd COFI Workshop on GWs Invited talkCOFI, Puerto RicOct 201828th Midwest Relativity Meeting TalkMilwaukee, Name of LISA Science Analysis: Imagining the Future Workshop participantSantorini, Company of LISA Science Analysis: Imagining the Future Workshop participantJan 2018NASA GW SIG Meeting, 231st AAS Meeting Invited talkNational Harbor, Name of LISA Science Analysis: Imagining the Future Workshop participant | VΑ |
| Oct 201828th Midwest Relativity Meeting TalkMilwaukee, 1June 2018MODEST-18 TalkSantorini, CJan 2018The architecture of LISA Science Analysis: Imagining the Future Workshop participantKeck InstitutJan 2018NASA GW SIG Meeting, 231st AAS Meeting Invited talkNational Harbor, National Harbor, | ty |
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| Jan 2018 NASA GW SIG Meeting, 231st AAS Meeting Invited talk National Harbor, N | ŝR |
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| Jan 2018 AAS 231 Dissertation talk National Harbor, M | 1D |
| | 1D |
| Oct 2017 27th Midwest Relativity Meeting talk; Blue Apple award Ann Arbor, a | MI |
| July 2017 12th Edoardo Amaldi Conference on Gravitational Waves talk Pasadena, G | CA. |
| Jan 2017 AAS 229 Poster, Chambliss Honorable mention Grapevine, | TΧ |
| Aug 2016 11th International LISA Symposium Poster Zurich, S | UI |
| Apr 2016 APS April Meeting Talk Salt Lake City, U | JT |
| Oct 2015 26th Midwest Relativity Meeting Talk <i>Evanston</i> , | IL |
| Apr 2015 APS April Meeting Talk Baltimore, N | 1D |
| Jan 2015 AAS 225 Poster Seattle, V | VA |
| Jan 2012 AAS 219 Poster Austin, | TΧ |

Mentoring

Julianne Cronin Undergrad research; 2017-2018

Simulating populations of over-contact M dwarf binaries observable by LISA Current student at Northwestern

Amia Ross High school intern; Summer 2017

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

Attending Harvard in Fall 2018

Michael Bueno REU student; Summer 2016

Simulating populations of double white dwarf binaries observable by LISA and Gaia; arXiv:1710.08370 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, A&A

CIERA Astronomer Evenings

FOUNDER AND LEAD ORGANIZER 2016-2018

Astronomy on Tap - Chicago

FOUNDING MEMBER AND PRESENTER

Physics & Astronomy Graduate Student Council

FOUNDING MEMBER, ASTRONOMY OUTREACH COMMITTEE HEAD

Astronomy Conversations

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

Dec 2015 - Aug 2018

Dearborn Observatory

Chicagoland area, IL

March 2016 - Aug 2018

Evanston, IL

Jan 2016 - Aug 2018

Adler Planetarium 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

SEPTEMBER 2, 2019