Michael J. Zevin || *Curriculum Vitae*

Northwestern University/CIERA, — 2145 Sheridan Road, F226 — Evanston, IL 60208

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Ph.D. candidate in physics and astronomy at Northwestern University, studying gravitational-wave astrophysics, compact objects, stellar evolution, and star cluster dynamics. Numerous leadership roles and varied contributions in citizen science, science communication, and outreach.

Education

Academic Qualifications

Northwestern University — **Ph.D.**, *Matriculating Spring 2020*
Evanston, IL — **M.S.**, *Fall 2016*
Thesis — Unveiling the Lives and Deaths of Stars through Gravitational Waves and Stellar Explosions
Advisor — Vicky Kalogera

University of Illinois — **B.S.**, *Spring 2012*
Champaign, IL
Majors in Astronomy and Physics, Minor in Music Performance

Fellowships

- **NSF IDEAS Fellowship** *2016–Present*
- **Illinois Space Grant Consortium Fellowship** *2017–Present*
- **NSF GK12 Fellowship** *2017–2018*
- **Oxford Centre for Cosmological Studies Balzan Fellowship**[1] *2018*
- **Kavli Summer Fellowship**[2] *2017*

Publications

First Author & Chaired Papers (with links)

Progenitors of Highly-Offset sGRBS
M. Zevin, L. Kelley, A. Nugent, W.F. Fong, C. Berry, V. Kalogera *2019*
(submitted)

Can Neutron-Star Mergers Explain the r-process Enrichment in Globular Clusters?
M. Zevin, K. Kremer, D. M. Siegel, S. Coughlin, B. T.-H. Tsang, C. P. L. Berry, V. Kalogera *2019*
The Astrophysical Journal (submitted)

Eccentric Black Hole Mergers in Dense Star Clusters: The Role of Binary-Binary Encounters **ApJ**
M. Zevin, J. Samsing, C. L. Rodriguez, C. J. Haster, E. Ramirez-Ruiz *2019*
The Astrophysical Journal **871**, 1
– Article in *AAS Nova*

On the Progenitor of Binary Neutron Star Merger GW170817 **ApJL**
The LIGO Scientific Collaboration and Virgo Collaboration[3] *2017*
The Astrophysical Journal Letters **850**, L40

[1] Research Advisor: Dr. Chris Lintott (New College, University of Oxford)
[2] Research Advisor: Dr. Enrico Ramirez-Ruiz (University of California Santa Cruz)
[3] *M. Zevin*: Chair of paper-writing team and analysis lead

Constraining Formation Models of Binary Black Holes with Gravitational-Wave Observations **ApJ**
M. Zevin, C. Pankow, C. R. Rodriguez, L. Sampson, E. Chase, V. Kalogera, F. A. Rasio *2017*
The Astrophysical Journal Letters **846**, 82

Gravity Spy: Integrating Advanced LIGO Detector Characterization, Machine Learning, and Citizen Science **CQG** *2017*
M. Zevin, S. Coughlin, S. Bahaadini, E. Besler, N. Rohani, S. Allen, M. Cabero, K. Crowston, A. K. Katsaggelos, S. L. Larson, T. K. Lee, C. Lintott, T. B. Littenberg, A. Lundgren, C. Østerlund, J. R. Smith, L. Trouille, V. Kalogera
Classical and Quantum Gravity **34**, 064003
– Covered by *AAS Press*

Second & Third Author Papers (with links)

COSMIC: Open-Source Binary Population Synthesis
K. Breivik, S. Coughlin, M. Zevin, C Rodriguez, C. Kimball, J. Andrews, M. Kurkowski, S. Larson, V. Kalogera *2019*
(in prep)

Black Holes: The Next Generation
C. Rodriguez, M. Zevin, P. Amaro-Seoane, S. Chatterjee, K. Kremer, F. A. Rasio, C. S. Ye *2019*
Physical Review D (submitted)

Illuminating Black Hole Binary Formation Channels with Spins in Advanced LIGO **ApJL**
C. Rodriguez, M. Zevin, C. Pankow, V. Kalogera, F. A. Rasio *2016*
The Astrophysical Journal Letters **832**, 1

Contributed Papers (with links)

The Missing Link in Gravitational-Wave Astronomy: Discoveries waiting in the decihertz range **ESA WP**
M. Arca Sedda, C. Berry, K. Jani, P. Amaro-Seoane, P. Auclair, J. Baird, T. Baker, E. Berti, K. Breivik, C. Caprini, X. Chen, D. Doneva, J. Ezquiaga, S. Ford, M. Katz, S. Kolkowitz, B. McKernan, G. Mueller, G. Nardini, I. Pikovski, S. Rajendran, A. Sesana, L. Shao, N. Tamanini, N. Warburton, H. Witek, K. Wong, M. Zevin *2019*
ESA's Voyage 2050 White Paper

Knowledge Tracing to Model Learning in Online Citizen Science Projects **IEEE TLT**
K. Crowston, C. Østerlund, T. Lee, C. Jackson, M. Harandi, S. Allen, S. Bahaadini, S. Coughlin, A. Katsaggelos, S. Larson, N. Rohani, J. Smith, L. Trouille, M. Zevin *2019*
IEEE Transactions on Learning Technologies (accepted)

Classifying the Unknown: Discovering Novel Gravitational-Wave Detector Glitches using Similarity Learning **PRD** *2019*
S. Coughlin, S. Bahaadini, N. Rohani, M. Zevin, O. Patane, M. Harandi, C. Jackson, V. Noroozi, S. Allen, J. Areeda, M. Coughlin, P. Ruiz, C. P. L. Berry, K. Crowston, A. K. Katsaggelos, A. Lundgren, C. Østerlund, J. R. Smith, L. Trouille, V. Kalogera
Physical Review D **99***, 082002*

Post-Newtonian Dynamics in Dense Star Clusters: Binary Black Holes in the LISA Band **PRD**
K. Kremer, C. L. Rodriguez, P. Amaro-Seoane, K. Breivik, S. Chatterjee, M. L. Katz, S. Larson, F. A. Rasio, J. Samsing, C. S. Ye, M. Zevin *2019*
Physical Review D **99***, 063003*

Post-Newtonian Dynamics in Dense Star Clusters: Formation, Masses, and Merger Rates of Highly-Eccentric Black Hole Binaries **PRD** *2018*
C. L. Rodriguez, P. Amaro-Seoane, S. Chatterjee, K. Kremer, F. A. Rasio, J. Samsing, C. S. Ye, M. Zevin
Physical Review D **98***, 123005*

DIRECT: Deep Discriminative Embedding for Clustering of LIGO Data **ICIP**
S. Bahaadini, V. Noroozi, N. Rohani, S. Coughlin, M. Zevin, V. Kalogera, A. K. Katsaggelos *2018*
25th IEEE International Conference on Image Processing Proceedings

Machine Learning for Gravity Spy: Glitch Classification and Dataset **ISJ**
*S. Bahaadini, V. Noroozi, N. Rohani, S. Coughlin, **M. Zevin**, J. R. Smith, V. Kalogera, A. K. Katsaggelos* *2018*
Information Sciences Journal **444**, *172*

Improvements in Gravitational-wave Sky Localization with Expanded Networks of Interferometers **ApJL**
*C. Pankow, E. A. Chase, S. Coughlin **M. Zevin**, V. Kalogera* *2018*
The Astrophysical Journal Letters **854**, *L25*

Deep Multi-view Models for Glitch Classification **ICASSP**
*S. Bahaadini, N. Rohani, S. Coughlin, **M. Zevin**, V. Kalogera, A. K. Katsaggelos* *2018*
IEEE International Conference on Acoustics, Speech, and Signal Processing Proceedings

Incorporating Current Research into Formal Higher Education Settings using Astrobites **AJP**
*N. E. Sanders, S. Kohler, C. Faesi, A. Villar, **M. Zevin*** *2017*
American Journal of Physics **85**, *741*

Astrophysical Prior Information and Gravitational-Wave Parameter Estimation **APJ**
*C. Pankow, L. Sampson, L. Perri, E. A. Chase, S. Coughlin **M. Zevin**, V. Kalogera* *2017*
The Astrophysical Journal **834**, *2*

Collaboration Papers (as part of the LIGO Scientific Collaboration, 2015–Present) . . . . . .

– *A gravitational-wave measurement of the Hubble constant following the second observing run of Advanced LIGO and Virgo*
– *An Optically Targeted Search for Gravitational Waves emitted by Core-Collapse Supernovae during the First and Second Observing Runs of Advanced LIGO and Advanced Virgo*
– *Model comparison from LIGO-Virgo data on GW170817's binary components and consequences for the merger remnant*
– *Search for Eccentric Binary Black Hole Mergers with Advanced LIGO and Advanced Virgo during their First and Second Observing Runs*
– *Tests of General Relativity with GW170817*
– *All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run*
– *All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data*
– *Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015–2017 LIGO Data*
– *Search for gravitational waves from Scorpius X-1 in the second Advanced LIGO observing run with an improved hidden Markov model*
– *All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run*
– *First Measurement of the Hubble Constant from a Dark Standard Siren using the Dark Energy Survey Galaxies and the LIGO/Virgo BinaryBlack-hole Merger GW170814*
– *Search for sub-solar mass ultracompact binaries in Advanced LIGO's second observing run*
– *Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run*
– *Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817*
– *Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO*
– *Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGOs Second Observing Run*
– *All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run*
– *Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs*
– *Tests of General Relativity with the Binary Black Hole Signals from the LIGO-Virgo Catalog GWTC-1*
– *A search for the isotropic stochastic background using data from Advanced LIGO's second observing run*
– *Constraining the p -Mode-g -Mode Tidal Instability with GW170817*
– *Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run*
– *Properties of the Binary Neutron Star Merger GW170817*
– *A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run*
– *Search for Multimessenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during Its First Observing Run, ANTARES, and IceCube*
– *Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run*

– *Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo*[4]
– *GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs*
– *GW170817: Measurements of Neutron Star Radii and Equation of State*
– *Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background*
– *Full band all-sky search for periodic gravitational waves in the O1 LIGO data*
– *Constraints on cosmic strings using data from the first Advanced LIGO observing run*
– *Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA*
– *GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences*
– *Effects of data quality vetoes on a search for compact binary coalescences in Advanced LIGOs first observing run*
– *All-sky search for long-duration gravitational wave transients in the first Advanced LIGO observing run*
– *First Search for Nontensorial Gravitational Waves from Known Pulsars*
– *First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data*
– *First low-frequency Einstein@Home all-sky search for continuous gravitational waves in Advanced LIGO data*
– *GW170608: Observation of a 19 Solar-mass Binary Black Hole Coalescence*
– *Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817*
– *Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817*
– *Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory*
– *On the Progenitor of Binary Neutron Star Merger GW170817*
– *A gravitational-wave standard siren measurement of the Hubble constant*
– *Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A*
– *Multi-messenger Observations of a Binary Neutron Star Merger*
– *GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral*[5]
– *GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence*
– *All-sky search for periodic gravitational waves in the O1 LIGO data*
– *Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data*
– *Search for high-energy neutrinos from gravitational wave event GW151226 and candidate LVT151012 with ANTARES and IceCube*
– *Search for intermediate mass black hole binaries in the first observing run of Advanced LIGO*
– *GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2*
– *Search for gravitational waves from Scorpius X-1 in the first Advanced LIGO observing run with a hidden Markov model*
– *Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B*
– *Effects of waveform model systematics on the interpretation of GW150914*
– *Search for continuous gravitational waves from neutron stars in globular cluster NGC 6544*
– *First Search for Gravitational Waves from Known Pulsars with Advanced LIGO*
– *Directional Limits on Persistent Gravitational Waves from Advanced LIGO's First Observing Run*
– *Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGO's First Observing Run*
– *Calibration of the Advanced LIGO detectors for the discovery of the binary black-hole merger GW150914*
– *All-sky search for short gravitational-wave bursts in the first Advanced LIGO run*
– *Exploring the sensitivity of next generation gravitational wave detectors*
– *The basic physics of the binary black hole merger GW150914*
– *Supplement: The Rate of Binary Black Hole Mergers Inferred from Advanced LIGO Observations Surrounding GW150914 (2016, ApJL, 833, L1)*
– *The Rate of Binary Black Hole Mergers Inferred from Advanced LIGO Observations Surrounding GW150914*
– *Upper Limits on the Rates of Binary Neutron Star and Neutron Star-Black Hole Mergers from Advanced LIGOs First Observing Run*
– *Results of the deepest all-sky survey for continuous gravitational waves on LIGO S6 data running on the Einstein@Home volunteer distributed computing project*

[4] ***M. Zevin***: Education and Public Outreach Liaison
[5] ***M. Zevin***: Education and Public Outreach Liaison

– *First targeted search for gravitational-wave bursts from core-collapse supernovae in data of first-generation laser interferometer detectors*
– *Binary Black Hole Mergers in the First Advanced LIGO Observing Run*
– *Improved Analysis of GW150914 Using a Fully Spin-Precessing Waveform Model*
– *Directly comparing GW150914 with numerical solutions of Einstein's equations for binary black hole coalescence*
– *Comprehensive all-sky search for periodic gravitational waves in the sixth science run LIGO data*
– *Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914*
– *Supplement: Localization and Broadband Follow-up of the Gravitational-wave Transient GW150914 (2016, ApJL, 826, L13)*
– *Localization and Broadband Follow-up of the Gravitational-wave Transient GW150914*
– *GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence*
– *Properties of the Binary Black Hole Merger GW150914*
– *Tests of General Relativity with GW150914*
– *High-energy neutrino follow-up search of gravitational wave event GW150914 with ANTARES and IceCube*
– *Search for transient gravitational waves in coincidence with short-duration radio transients during 2007-2013*
– *Observing gravitational-wave transient GW150914 with minimal assumptions*
– *GW150914: First results from the search for binary black hole coalescence with Advanced LIGO*
– *GW150914: The Advanced LIGO Detectors in the Era of First Discoveries*
– *GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes*
– *All-sky search for long-duration gravitational wave transients with initial LIGO*
– *Astrophysical Implications of the Binary Black-hole Merger GW150914*
– *Observation of Gravitational Waves from a Binary Black Hole Merger*
– *Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo*

Presentations

Invited Talks

CGCA Seminar — **Seminar**
Unveiling the Lives and Deaths of Stars through Compact Object Mergers — *March 2019*
Milwaukee, WI

IGC Seminar — **Seminar**
From the Detected to the Detectors: Using Gravitational Waves to Enable Insights from the Stellar Graveyard & the Next Generation of Citizen Science — *March 2018*
Portsmouth, UK

SPI-MAX Seminar — **Seminar**
From the Detected to the Detectors: Using Gravitational Waves to Enable Insights from the Stellar Graveyard & the Next Generation of Citizen Science — *February 2018*
Oxford, UK

Contributed Talks & Posters

Aspen Winter Conference — **Talk**
Eccentric Black Hole Mergers in Dense Star Clusters: Post-Newtonian Effects & Higher Multiplicity Encounters — *February 2019*
Aspen, CO

AAS 233 — **Talk**
Eccentric Black Hole Mergers in Dense Star Clusters: The Role of Binary-Binary Encounters — *January 2019*
Seattle, WA

NSF Research Traineeship Annual Meeting — **Poster**
Gravity Spy: Integrating Gravitational-Wave Astrophysics, Machine Learning, and Citizen Sciences — *September 2018*
Washington, DC

MODEST-18 **Talk**
The Role of Binary-Binary Interactions in Inducing Eccentric Black Hole Mergers *June 2018*
Santorini, Greece

APS April Meeting **Talk**
On the Progenitor of Binary Neutron Star Merger GW170817 *April 2018*
Columbus, OH

Detecting the Unexpected: Discovery in the Era of Astronomically Big Data **Talk**
The Future of Citizen Science: Coupling Crowdsourcing and Machine Learning *March 2017*
Baltimore, MD

APS April Meeting **Talk**
Discriminating Formation Channels of Binary Black Hole Systems with Advanced LIGO *January 2017*
Washington, DC

AAS 229 **Talk**
Discriminating Formation Channels of Binary Black Hole Systems with Advanced LIGO *January 2017*
Grapevine, TX

AAS 229 **Workshop & Poster**
Astrobites: Engaging Undergraduate Science Majors with Current Astrophysical Research *January 2017*
Grapevine, TX

AAS 228 **Talk**
Gravity Spy — Integrating aLIGO detector characterization, machine learning, and citizen science *June 2016*
San Diego, CA

Northwestern Computational Research Exposition **Poster**
Integrating aLIGO detector characterization, machine learning, and citizen science *April 2016*
Evanston, IL
– *Awarded first prize in poster competition*

Midwest Relativity Meeting **Talk**
LIGO glitch classification through the combination of machine learning and citizen science *September 2015*
Evanston, IL

Outreach & Public Engagement

Science Communication

Astrobites **Blog**
Author, Administrator, & Leadership Team *2014–Present*
– *Astronomy blog partnered with the AAS, provides daily summaries of recent astronomy research articles*
– *Initiated the "Beyond" series, which covers topics on career advice, graduate school applications, and diversity, equity, and inclusivity in astronomy*

ComSciCon **Workshop**
Organizer, Attendee *2017–Present*
– *National graduate-student run science communication workshop for graduate students in STEM fields*

Astronomy on Tap **Public Event**
Co-founder, organizer, host, speaker *2015–Present*
– *Co-founded the Chicago branch of Astronomy on Tap, which hosts astronomy talks and space-based trivia at bars and breweries in the Chicago-land area*

Rapid Fire Research **Departmental Event**
Founder, Chair *2016–Present*
– *Annual research presentation event for graduate and undergraduate students in Northwestern Department of Physics and Astronomy*

Machine Learning Meetups — **Public Event**
Organizer, Host — *2016–2018*
– *Quarterly interdisciplinary colloquia on data science and machine learning topics*

Chicagoland Science Penpals — **Event**
Participant — *2017*
– *Correspondence with students in Chicago public schools about scientific research and science as a profession, using handwritten letters*

Public Talks & Lectures

Astronomer Conversations — **Lecture Series**
Adler Planetarium, Space Visualization Laboratory — *2014–Present*
– *Monthly public presentations at the Adler Planetarium for museum guests*

Astronomer Evenings — **Lecture Series**
Northwestern University, Dearborn Observatory — *2016–Present*
– *Presentations during public observing hours at the Dearborn Observatory*

Chipping Norton Amateur Astronomy Group — **Keynote Lecture**
Chipping Norton, UK — *February 2018*

Take Our Children to Work Day — **Lecture**
Northwestern University — *April 2016, 2018*

Haven Midde School — **Invited Speaker**
Evanston, IL — *April 2017, 2018*

Chicago Astronomical Society — **Keynote Lecture**
Adler Planetarium — *May 2017*

Avery Coonley School — **Invited Speaker**
Downers Grove, IL — *May 2017*

Seven Minutes of Science: An Interdisciplinary Symposium — **Public Talk**
Northwestern University — *April 2017*

Highcrest Elementary — **Invited Speaker**
Wilmette, IL — *March 2017*

Einstein Evenings — **Lecture Series**
Northwestern University, Dearborn Observatory — *2015–2016*
– *Monthly presentations during observing hours on LIGO discoveries in celebration of the 100th anniversary of General Relativity*

Nettlehorst Elementary — **Invited Speaker**
Chicago, IL — *February 2016*

Publications

Astrobites — **Blog**
*Authored over 20 blog posts on current research in astrophysics (**Link**)* — *2014–Present*

LIGO Science Summary — **Article**
*Companion science summary to the LIGO-Virgo O2 Populations paper (**Link**)* — *November 2018*
*Companion science summary to the GW170817 Detection paper (**Link**)* — *October 2017*

LIGO Magazine — **Magazine Article**
*The Gravity Spy Project - Machine Learning and Citizen Science (**Link**)* — *March 2017*

Helix Magazine — **Magazine Article**
*The Legacy of Scientific Discovery (**Link**)* — *March 2017*

Teaching

Northwestern University — **Lecture/TA**
Introduction to Astronomy, Stellar Astrophysics, Data-Driven Research in Astronomy — *2015–Present*
– *Guest lectured, developed assignments, graded, and ran telescope observing sessions*

GK12 Fellowship — **Teaching**
Reach for the Stars; Evanston, IL — *2017–2018*
– *Co-taught astronomy classes at Evanston Township High School*
– *Developed curriculum, coding-based lessons, and visualizations for high-school students*

Kids Science Labs — **Teaching**
Lead Teacher; Chicago, IL — *2013–2015*
– *Taught classes of 3-12 year old students in hands-on, experiential science classes*
– *Designed curriculum for science summer camps*

Adler Planetarium — **Teaching**
Science Leadership Corps Instructor, Mission Specialist; Chicago, IL — *2012–2014*
– *Designed educational programming*
– *Facilitated exhibits, performed experiments, and gave astronomy talks to the public*
– *Led under-represented students in designing experiments for high-altitude balloon launches*

Students Mentored

Michael Kurkowski — **Undergraduate**
Pair Instability Supernova Prescriptions in Binary Population Synthesis; CIERA REU Student — *2019*

Jared Machtinger — **High School**
Population properties of binary black holes detected by LIGO; CIERA Summer Student — *2019*

Danai Avdela — **High School**
Population properties of binary black holes detected by LIGO; CIERA Summer Student — *2019*

Isaac Rivera — **Undergraduate**
Offset distributions of short gamma-ray bursts; CIERA REU Student — *2018*

Grace Kern — **High School**
Optimization of Gravity Spy image retirement; CIERA Summer Student — *2018*

Hannah Stein — **High School**
Optimization of Gravity Spy image retirement; CIERA Summer Student — *2018*

Yuqi Yun — **Undergraduate**
Gaussian Process regression of black hole mass distributions; CIERA REU Student — *2016*

Sophie Haight — **High School**
Gaussian Process regression of binary stellar evolution sequences; CIERA Summer Student — *2016*

Awards & Honors

- **Avery Coonley School, Graduate Keynote Speaker** — *June 2018*
- **American Astronomical Society, Media Intern** — *June 2016*
- **Breakthrough Prize in Fundamental Physics** *(as part of the LIGO-Virgo Collaboration)* — *May 2016*
- **First Place, Poster Competition** *(Computational Research Day, Northwestern University)* — *April 2016*
- **High Distinction in Physics** *(University of Illinois Urbana-Champaign)* — *May 2012*

Affiliations & Leadership Positions

- **Astrobites:** *Administrator, Author* — *2014–Present*
- **ComSciCon National:** *Organizer* — *2017–Present*
- **LIGO Scientific Collaboration:** *Member* — *2015–Present*
- **American Astronomical Society:** *Junior Member* — *2016–Present*
- **American Physical Society:** *Member* — *2016–Present*
- **CIERA Compact Objects Coffee:** *Founder, chair* — *2018–Present*
- **Physics and Astronomy Graduate Student Council:** *Quality of Life Chair* — *2016–2018*
- **Rapid Fire Research:** *Founder, chair* — *2016–2018*

Service Work

Peer Reviewer for: *2017–Present*

– *The Astrophysical Journal*
– *The Astrophysical Journal Letters*
– *Astronomy and Astrophysics*