

Yasmeen Asali

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RESEARCH INTERESTS

Low-mass galaxy formation and evolution, satellite galaxies and environmental effects, star formation, stellar-halo mass relation

EDUCATION

Yale University, New Haven, CT 2020 - Present

Ph.D. in Astronomy

M.S., M.Phil. in Astronomy (2022)

Columbia University, New York, NY 2016 - 2020

B.A. in Astrophysics

Departmental Honors in Physics

Dean's List Spring 2017, Fall 2017, Spring 2018, Spring 2019

RESEARCH APPOINTMENTS

Graduate Researcher September 2020 - Present

Yale Astronomy Department

New Haven, CT, USA

Thesis Advisor: Marla Geha

Undergraduate Researcher September 2017 - August 2020

Columbia Astronomy Department

New York, NY, USA

Advisors: Szabi Marka, Zsuzsa Marka

Summer Undergraduate Researcher June 2019 - April 2020

Dutch National Institute for Subatomic Physics (Nikhef)

Amsterdam, The Netherlands

University of Florida's International REU Program in Gravitational Physics

Advisor: Chris Van Den Broeck

Summer Undergraduate Researcher June 2018 - August 2018

Instituto de Astrofísica, Pontificia Universidad Católica de Chile

Santiago, Chile

Advisors: Germán Gómez-Vargas, Andreas Reisenegger

PUBLICATIONS

First-author:

1. **Y. Asali**, P. T. H. Pang, A. Samajdar, and C. Van Den Broeck. Probing resonant excitations in exotic compact objects via gravitational waves. *Phys. Rev. D*, 102(2):024016, July 2020

Second- or third-author, or significant contribution:

1. A. G. Sullivan, **Y. Asali**, Z. Márka, D. Sigg, S. Countryman, I. Bartos, K. Kawabe, M. D. Pirello, M. Thomas, T. J. Shaffer, K. Thorne, M. Laxen, J. Betzwieser, K. Izumi, R. Bork, A. Ivanov, D. Barker, C. Adams, F. Clara, M. Factourovich, and S. Márka. Timing system of LIGO discoveries. *Phys. Rev. D*, 108(2):022003, July 2023

Other co-author:

2. E. Kado-Fong, M. Geha, Y.-Y. Mao, M. A. C. de los Reyes, R. H. Wechsler, **Y. Asali**, N. Kallivayalil, E. O. Nadler, E. J. Tollerud, and B. Weiner. SAGAbg I: A Near-Unity Mass Loading Factor in Low-Mass Galaxies via their Low-Redshift Evolution in Stellar Mass, Oxygen Abundance, and Star Formation Rate. *arXiv e-prints*, page arXiv:2401.16469, Jan. 2024
1. R. Abbasi and IceCube Collaboration (incl. **Y. Asali**). IceCube Search for Neutrinos Coincident with Gravitational Wave Events from LIGO/Virgo Run O3. *ApJ*, 944(1):80, Feb. 2023

Non-Refereed Publications:

2. A. Polzin, **Y. Asali**, S. Bhimani, M. Brady, M. C. Chen, L. DeMarchi, M. Gurevich, E. Lichko, E. Loudon, J. Malewicz, S. Pagan, M. Rice, Z. Shen, E. Simon, C. Stauffer, J. Luna Zagorac, K. Auchettl, K. Breivik, H.-W. Chen, D. Coppejans, S. Kolwa, R. Margutti, P. Natarajan, E. Nelson, K. L. Page, S. Toonen, K. E. Whitaker, and I. Zhuravleva. Astronomy as a Field: A Guide for Aspiring Astrophysicists. *arXiv e-prints*, page arXiv:2312.04041, Dec. 2023
1. **Y. Asali**, K. Gerbig, A. Ghosh, C. Lindsay, Z. Shen, and M. Geha. A Standardized Framework for Collecting Graduate Student Input in Faculty Searches. *Bulletin of the AAS*, 54(1), December 2022. <https://baas.aas.org/pub/2022i091>

Included on the following author lists:

LIGO Scientific Collaboration O3 Author List

- incl. 45 publications
- approved Oct. 2019 for Feb. 2020 revision, removed Dec. 2022

LIGO O3 Detector Author List

- incl. 12 publications
- approved Oct. 2019 for Dec. 2019 revision, removed Dec. 2022

PRESENTATIONS

Invited Talks:

- | | |
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| Amherst College Colloquium | March 2024 |
| Vanderbilt University EMIT Astronomy Seminar | March 2024 |

Contributed Talks:

- | | |
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| CCA Galactic Frontiers: Dwarf Galaxies in the Local Volume and Beyond | July 2023 |
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Poster Presentations:

12. M. de los Reyes, **Y. Asali**, and R. Wechsler. Stellar Mass Calibrations in Low-Mass Galaxies. In *American Astronomical Society Meeting Abstracts*, volume 56 of *American Astronomical Society Meeting Abstracts*, page 338.05, Feb. 2024
11. I. Pasha, **Y. Asali**, W. Cerny, and J. Monzon. The First Mile: Bridging Introductory Programming to Astronomical Research Skills via a New Textbook, Exercise Compendium, and Seminar Framework. In *American Astronomical Society Meeting Abstracts*, volume 56 of *American Astronomical Society Meeting Abstracts*, page 186.04, Feb. 2024
10. A. Beck, **Y. Asali**, E. Cully, Z. Marka, and GECCO (Columbia Experimental Gravity Group) Team. Probing the Statistical Relationship Between Binary Black Hole Mergers and Active Galactic Nuclei. In *APS April Meeting Abstracts*, volume 2022 of *APS Meeting Abstracts*, page F01.009, Apr. 2022
9. D. Veske, IceCube Collaboration, Z. Marka, S. Countryman, **Y. Asali**, and A. Silva Oliveira. Multi-messenger searches via IceCube's high-energy neutrinos and gravitational-wave detections of LIGO/Virgo. In *37th International Cosmic Ray Conference*, page 950, Mar. 2022

8. D. Veske, S. Countryman, **Y. Asali**, Z. Marka, I. Bartos, and S. Marka. Searching for joint gravitational-wave and high energy neutrino events with LLAMA. In *APS April Meeting Abstracts*, volume 2021 of *APS Meeting Abstracts*, page B09.007, Jan. 2021
7. **Y. Asali**, P. Pang, and C. Van Den Broeck. Probing Resonant Modes in Exotic Compact Objects via Gravitational Waves. *Conference for Undergraduate Women in Physics, Yale University*, Jan. 2020
6. **Y. Asali**, P. Pang, and C. Van Den Broeck. Probing Resonant Modes in Exotic Compact Objects via Gravitational Waves. In *American Astronomical Society Meeting Abstracts #235*, volume 235 of *American Astronomical Society Meeting Abstracts*, page 107.05, Jan. 2020
5. **Y. Asali**, P. Pang, and C. Van Den Broeck. Probing Resonant Modes in Exotic Compact Objects via Gravitational Waves. *Conference for Undergraduate Women in Astronomy, West Virginia University*, Nov. 2019
4. **Y. Asali**, P. Pang, and C. Van Den Broeck. Probing Resonant Modes in Exotic Compact Objects via Gravitational Waves. *Undergraduate Research Showcase, Columbia University*, Oct. 2019
3. **Y. Asali**, P. Pang, and C. Van Den Broeck. Probing Resonant Modes in Exotic Compact Objects via Gravitational Waves. *Astrofest, Columbia University*, Sept. 2019 – (2nd Place Prize)
2. **Y. Asali**, G. Gomez-Vargas, and A. Reisenegger. Dark Matter Annihilation in the Galactic Center. In *American Astronomical Society Meeting Abstracts #233*, volume 233 of *American Astronomical Society Meeting Abstracts*, page 350.02, Jan. 2019
1. **Y. Asali**, G. Gomez-Vargas, and A. Reisenegger. Dark Matter Annihilation in the Galactic Center. *Astrofest, Columbia University*, Sept. 2018

TEACHING EXPERIENCE

Yale Astronomy Research Preparation Series, <i>Instructor</i>	Spring 2024
Yale Poorvu Center for Teaching and Learning, <i>McDougal Graduate Fellow</i>	May 2022 - Present
Warrior Scholar Project, <i>Research Project Leader</i>	June 2023, June 2024
La Serena School for Data Science, <i>Teaching Assistant</i>	August 2021, August 2022
Yale University, <i>Teaching Fellow</i>	
Research Methods in Astrophysics, Astronomy Department	Fall 2022
Current Research in Astrophysics, Astronomy Department	Fall 2021
Frontiers & Controversy in Astrophysics, Astronomy Department	Spring 2021
Introduction to General Relativity and Black Holes, Astronomy Department	Fall 2020
Columbia University, <i>Teaching Assistant</i>	
Theories of the Universe, Astronomy Department	Spring 2020
Weapons of Mass Destruction, Physics Department	Spring 2018, Spring 2019
Stars and Atoms, Astronomy Department	Fall 2018

AWARDS, SCHOLARSHIPS AND GRANTS

Teaching Innovation Project Grant	2023
Flipped Science Fair First Place Prize	2023
Dean's Fund for Seminars and Colloquia, Yale Graduate School of Arts and Sciences	2022, 2023
GPPD Career Grant, POD Network	2022
Columbia University Office of Academic Affairs Conference Fund	2018, 2020
ACM-W Scholarship for Women in Computing	2019
Sigma Xi Grant in Aid of Research	2019
Columbia University Senior Thesis Research Fund	2018
Columbia University C.S. Wu Fund for Women in Physics	2018

OUTREACH

Invited Talks and Panels:

Vanderbilt University, March 2024. EMIT Women in Astro Panel Event
Yale Pathways Summer Program, July 2022. Exploring the Milky Way Galaxy and its Satellites
Astronomy on Tap NYC, November 2021. Cosmic Happy Hour: Exotic Compact Objects
Columbia Center for Undergraduate Global Engagement, November 2019. Global Spotlight Panel Discussion:
So You Think You Can Research Abroad
Columbia University Public Outreach Lecture for Skt. Josef's School, April 2019. Gravitational Wave Astro-
physics with LIGO

Open Labs at Yale, <i>Scientist Volunteer</i>	February 2023 - Present
AAS Astronomy Ambassadors Program, <i>Outreach Ambassador</i>	January 2022 - Present
Skype a Scientist, <i>Scientist Volunteer</i>	March 2020 - Present
Letters to a Pre-Scientist, <i>Scientist Volunteer</i>	August 2019 - June 2021
SCiMMA Education and Public Outreach, <i>Contributor</i>	April 2020 - September 2020
Columbia Astronomy Public Outreach, <i>Volunteer</i>	February 2017 - May 2020

MENTORING

Research Advising:

Meredith Stone , UMass Amherst (undergraduate, Dorrit Hoffleit Scholar)	June 2021 - August 2021
Amanda Beck , Columbia University (undergraduate)	September 2019 - May 2021
Ana Carolina Oliveira , Columbia University (undergraduate)	May 2020 - September 2020
Yale Astro Sibs Program, <i>Grad Student Mentor & Head Coordinator</i>	September 2020 - Present
Yale Graduate Affiliate for Ezra Stiles College, <i>Graduate Affiliate</i>	September 2022 - Present

AWARDED OBSERVING PROPOSALS

Palomar Observatory (CWI) - 7 nights awarded (PI) <i>The Mass Functions of Satellites around Milky Way Analogs</i>	Yale 2024A
Perkins Telescope Observatory (PRISM) - 4 nights awarded (CoI) <i>Star Formation in Dwarf Galaxies as a Function of Environment</i>	FCAD 2023B
Palomar Observatory (CWI) - 6 nights awarded (PI; Highest Ranked in 2023B Cycle) <i>The Mass Functions of Satellites around Milky Way Analogs</i>	Yale 2023B

OBSERVING EXPERIENCE

Hale Telescope (5.1 m), CWI - Palomar Observatory, California	16 nights
Hale Telescope (5.1 m), DBSP - Palomar Observatory, California	17 nights
Hale Telescope (5.1 m), TripleSpec - Palomar Observatory, California	1 night
Anglo-Australian Telescope (3.9 m), 2dF - Siding Spring Observatory, Coonabarabran	3 nights
Hiltner Telescope (2.4 m) - MDM Observatory, Arizona	4 nights

SERVICE

Professional:

Astronomy Graduate Student Congress, <i>Co-Founder and Yale Representative</i>	2023 - Present
Yale Astronomy Student Council, <i>Elected Representative</i>	2021 - Present
Yale Astronomy Committee on Diversity and Climate, <i>Steering Committee</i>	2022 - Present
Yale Data Science X Astronomy & Astrophysics Seminar, <i>Organizer</i>	2021 - Present
Yale GSAS Orientation, <i>Community Values Orientation Leader</i>	2023

Yale Physics Department Faculty Hiring Committee, <i>Graduate Representative</i>	2023
Columbia Alumni Representative Committee, <i>Prospective Student Interviewer</i>	2021 - 2023
AAS 237 Chambliss Poster Competition, <i>Judge</i>	2021
Columbia BlueShift Astronomy Society, <i>President and Senior Advisor</i>	January 2018 - May 2020

Community:

New Haven Science Fair, <i>Judge</i>	May 2023
Harlem Reading Team Math, <i>Kindergarten Tutor and Group Leader</i>	September 2017 - June 2021

MEDIA COVERAGE

A Grad Student Seat at the Faculty Hiring Table , <i>astrobit.es</i>	January 2023
Senior Spotlight: Yasmeen Asali , <i>the Blue and White Magazine</i>	May 2020

PROFESSIONAL SOCIETIES

Astronomical Society of the Pacific (ASP)	2022 - Present
American Astronomical Society (AAS)	2019 - Present
American Physical Society (APS)	2019 - Present
POD Network	2022 - 2023
Sigma Xi: The Scientific Research Honor Society	2019 - 2021
Association for Computing Machinery	2020 - 2021

WEBSITE DEVELOPMENT

Personal Website (Site Link)	Primary Builder 
Astronomy Graduate Student Congress Website (Site Link)	Primary Builder, 2024 
Astronomy Research Preparation Series Website (Site Link)	Contributor, 2024 
Geha Group Website (Site Link)	Contributor, 2023 
Columbia Experimental Gravity Group Website (Site Link)	Contributor, 2020 
SCiMMA Website (Site Link)	Contributor, 2019 
LSST Optical Counterparts to GWs Workshop Website (Site Link)	Primary Builder, 2019 
Future by the Future Workshop Website (Site Link)	Contributor, 2018 