

Elaad Applebaum

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Education

Rutgers, The State University of New Jersey

Ph.D. in Physics and Astronomy

Piscataway, NJ

Aug 2015 - May 2021 (Anticipated)

University of Illinois at Urbana-Champaign

B.S. in Physics, Minors in Math, Italian; *magna cum laude*

Urbana, IL

Aug 2011 - May 2015

Professional Experience

Rutgers, The State University of New Jersey

Ph.D. Candidate, advised by Alyson Brooks

Piscataway, NJ

Aug 2015 - Present

- Using cosmological hydrodynamic simulations to investigate galaxy formation and evolution.
- Studying faint and ultra-faint dwarf galaxies around the Milky Way, including the influence of environment on their properties.
- Implemented a stochastic IMF sampling scheme for supernova feedback in the simulations.

National Institute of Nuclear Physics (INFN)

Undergraduate Researcher, advised by Paolo Giacomelli

Bologna, Italy

June 2014 - Aug 2014

- Studied decay channel performances with future upgrades to CMS detector

Weizmann Institute of Science

Undergraduate Researcher, advised by Yosef Nir

Rehovot, Israel

June 2013 - Aug 2013

- Analyzed measurements of time-reversal violation in the CPLEAR and BaBar experiments

Publications

- [6] “Quantifying scatter in galaxy formation at the lowest masses,”
Munshi, F, Brooks, A.M., **Applebaum, E.**, Christensen, C.R., Sligh, J.P., Quinn, T., 2021, *ApJ Submitted*, arXiv:2101.05822 [ADS]
- [5] “Ultra-faint dwarfs in a Milky Way context: Introducing the Mint Condition DC Justice League Simulations,”
Applebaum, E., Brooks, A.M., Christensen, C.R., Munshi, F., Quinn, T.R., Shen, S., Tremmel, M., 2021, *ApJ*, 906, 96, arXiv:2008.11207 [ADS]
- [4] “Quenching timescales of dwarf satellites around Milky Way-mass hosts,”
Akins, H.B., Christensen, C.R., Brooks, A.M., Munshi, F., **Applebaum, E.**, Angelhardt, A., Chamberland, L., 2020, *ApJ Accepted*, arXiv:2008.02805 [ADS]
- [3] “A Stochastically Sampled IMF Alters the Stellar Content of Simulated Dwarf Galaxies,”
Applebaum, E., Brooks, A.M., Quinn, T.R., Christensen, C.R., 2020, *MNRAS*, 492, 8, arXiv:1811.00022 [ADS]

- [2] “Dancing in the Dark: Uncertainty in Ultrafaint Dwarf Galaxy Predictions from Cosmological Simulations,”
Munshi, F., Brooks, A.M., Christensen, C., **Applebaum, E.**, Holley-Bockelmann, K., Quinn, T.R., Wadsley, J., 2019, *ApJ*, 874, 40, arXiv:1810.12417 [[ADS](#)]
- [1] “Subtleties in the BaBar measurement of time-reversal violation,”
Applebaum, E., Efrati, A., Grossman, Y., Nir, Y., Soreq, Y., 2014, *Phys. Rev. D*, 89, 76011, arXiv:1312.4164 [[ADS](#)]

Teaching Experience

Course Assistant for Honors Classical Mechanics II, Rutgers	Spring 2018
Recitation TA for Honors Classical Mechanics I, Rutgers	Fall 2017
Lab TA for Observational Radio Astronomy, Rutgers	Spring 2017
Recitation TA for Electricity and Magnetism, Rutgers	Fall 2016
Lab TA for Classical Mechanics, UIUC	Spring 2015
Recitation TA for Intro to Classical Mechanics, UIUC	Fall 2014

Honors and Awards

Robert A. Schommer Prize, Rutgers	May 2020
<i>Best first-author journal article by a graduate student</i>	
IAU ExoWorlds Naming Contest Runner-Up	Dec 2019
Blue Waters Graduate Fellowship , NCSA	July 2018 - July 2019
<i>One year of funding + 50k node-hours</i>	
SAS Excellence Fellowship, Rutgers	Aug 2015 - May 2016
<i>One year of funding</i>	
Henry C. Torrey Fellowship, Rutgers	Aug 2015 - May 2016
Ernest M. Lyman Prize, UIUC	May 2015
LAS James Scholar, UIUC	Aug 2011 - May 2015
Robert W. Rogers Merit Scholarship, UIUC	Aug 2011 - May 2013

Leadership, Service, and Outreach Experience

Co-founder of RAPSCALLIONS , professional development seminar series	Jan 2020 - Present
Graduate Studies and Life Committee	Sept 2017 - May 2020
Project Mentor, Byrne Seminar/RU-PREP	Sept 2019 - Nov 2019
Near-Peer Mentor, Sean MacBride, Rutgers REU [ADS]	May 2018 - Aug 2018
Near-Peer Mentor, Umran Haji, Rutgers REU [ADS]	May 2017 - Aug 2017
Treasurer, Physics and Astronomy Graduate Student Organization	Aug 2016 - Aug 2017

Skills

Software and Computing: Python (e.g. NumPy, SciPy, pandas, Matplotlib, scikit-learn), Jupyter, C/C++, L^AT_EX, Git, SQL, MATLAB, bash, PBS

Languages: Native English; Fluency in Spanish, Italian, Hebrew

Selected Presentations

University of Arizona Galaxy Crawl, <i>Seminar</i>	Sept 2020
The Local Group: Assembly and Evolution (STScI Symposium), <i>Contributed Talk</i>	Sept 2020
Friends of Rutgers Astronomy Alumni Event, <i>Invited Talk</i>	Dec 2019
STScI Galaxy Journal Club, <i>Seminar</i>	Nov 2019
Santa Cruz Galaxy Workshop, <i>Poster</i>	Aug 2019
NCSA Blue Waters Symposium, <i>Contributed Talk and Poster</i>	June 2019
AAS Winter Meeting, <i>Contributed Talk</i>	Jan 2019
Santa Cruz Galaxy Workshop, <i>Contributed Talk</i>	Aug 2018
CCA NY Area Computational Hydro Workshop, <i>Contributed Talk</i>	Sept 2017
Undergraduate Research Symposium, UIUC, <i>Contributed Talk</i>	Jan 2015