

Elaad Applebaum

elaadapplebaum.com

(312) 404 · 6727 ◦ elaad.applebaum@gmail.com

Education

Rutgers, The State University of New Jersey	<i>Piscataway, NJ</i>
Ph.D. in Physics and Astronomy	Aug 2015 - Oct 2021 (Anticipated)
University of Illinois at Urbana-Champaign	<i>Urbana, IL</i>
B.S. in Physics, Minors in Math, Italian; magna cum laude	Aug 2011 - May 2015

Professional Experience

Rutgers, The State University of New Jersey	<i>Piscataway, NJ</i>
<i>Ph.D. Candidate, advised by Alyson Brooks</i>	May 2016 - Present

- Using cosmological simulations to investigate galaxy evolution
- Studying star formation in dwarf galaxies
- Implemented more realistic star formation recipes

<i>Teaching</i>	Aug 2016 - Present
-----------------	--------------------

- Course Assistant for 124H: Analytical Physics IB Honors (Classical Mechanics)
- Recitation TA for 123H: Analytical Physics IA Honors, (Classical Mechanics)
- Lab TA for 343: Observational Radio Astronomy
- Recitation TA for 227: Analytical Physics IIA (Electricity and Magnetism)

National Institute of Nuclear Physics (INFN)	<i>Bologna, Italy</i>
<i>Undergraduate Researcher, advised by Paolo Giacomelli</i>	June 2014 - Aug 2014

- Studied decay channel performances with future upgrades to CMS detector

Weizmann Institute of Science	<i>Rehovot, Israel</i>
<i>Undergraduate Researcher, advised by Yosef Nir</i>	June 2013 - Aug 2013

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

Honors and Awards

Blue Waters Graduate Fellowship , NCSA	2018 - 2019
SAS Excellence Fellowship, Rutgers	2015 - 2016
Henry C. Torrey Fellowship, Rutgers	2015 - 2016
LAS James Scholar, UIUC	2011 - 2015
Robert W. Rogers Merit Scholarship, UIUC	2011 - 2013

Mentoring, Service, and Outreach Experience

Graduate Studies and Life Committee	Sept 2017 - Present
Near-Peer Mentor, Sean MacBride, Wheaton College (Rutgers REU)	May 2018 - Aug 2018
Near-Peer Mentor, Umran Haji, UC Berkeley (Rutgers REU) [ADS]	May 2017 - Aug 2017
Treasurer, Physics and Astronomy Graduate Student Association	Aug 2016 - Aug 2017

Publications

- [4] “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 [\[ADS\]](#)
- [3] “Roll of the Dice: A Stochastically Sampled IMF Alters the Stellar Content of Simulated Dwarf Galaxies,”
Applebaum, E., Brooks, A.M., Quinn, T.R., Christensen, C.R., 2018, *MNRAS*, submitted, arXiv:1811.00022 [\[ADS\]](#)
- [2] “Going, going, gone dark: Quantifying the scatter in the faintest dwarf galaxies,”
Munshi, F., Brooks, A.M., **Applebaum, E.**, Weisz, D.R., Governato, F., Quinn, T.R., 2017, arXiv:1705.06286 [\[ADS\]](#)
- [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 [\[ADS\]](#)

Selected Presentations

Looking Out for the Little Guy: A Comprehensive Study of Star Formation in Dwarf Galaxies NCSA Blue Waters Symposium	June 2019
Ultra-Faint Dwarf Galaxies: The New Frontier in Cosmological Simulations AAS Winter Meeting	Jan 2019
Roll of the Dice: Stochastically Sampling the IMF in Cosmological Simulations Santa Cruz Galaxy Workshop	Aug 2018
Galaxies Less Travelled: Star Formation in Low Mass and Low Surface Brightness Galaxies CCA NY Area Computational Hydro Workshop	Sept 2017
Studies of $H \rightarrow ZZ \rightarrow 4\ell$ Performance for Phase II CMS Upgrades Undergraduate Research Symposium, UIUC	Jan 2015

Skills

Programming:	Fluency in Python, C/C++, LaTeX; familiarity with Matlab
Software:	pynbody, NumPy, SciPy, pandas, Matplotlib
Languages:	Native English; Fluency in Spanish, Italian, Hebrew