
EVAN SCHNEIDER

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[evanschneider.github.io](https://github.com/evanschneider)
(US Citizen)

Research focus: galaxy formation and evolution with an emphasis on computational techniques

EDUCATION

University of Arizona, Tucson, Arizona

M.S. August 2012 - Astronomy

Ph.D. May 2017 - Astronomy & Astrophysics

Doctoral Thesis Title: *Revealing the Physics of Galactic Winds through Massively-Parallel Hydrodynamics Simulations*

Advisor: Dr. Brant Robertson

Bryn Mawr College, Bryn Mawr, Pennsylvania 2006-2010

B.A. - Mathematics, Physics

summa cum laude, with Honors in Physics

EMPLOYMENT AND RESEARCH EXPERIENCE

NASA Hubble Fellow

Department of Astrophysical Sciences, Princeton University, Princeton, NJ 2017 - present

Ph.D. Candidate

Steward Observatory, The University of Arizona, Tucson, AZ 2012 - 2017

Advisor: Dr. Brant Robertson

Masters Student

Steward Observatory, The University of Arizona, Tucson, AZ 2010 - 2012

Advisor: Dr. Chris Impey

Undergraduate Thesis Student

Bryn Mawr College, Bryn Mawr, PA 2009-2010

Advisor: Dr. Peter Beckmann

Smithsonian Astrophysical Observatory REU

Harvard-Smithsonian Center for Astrophysics, Cambridge, MA Jun. 2009 - Aug. 2009

Advisors: Dr. Andrea Dupree, Dr. Nancy Brickhouse

National Radio Astronomy Observatory REU

National Radio Astronomy Observatory, Charlottesville, VA Jun. 2008 - Aug. 2008

Advisor: Dr. Scott Ransom

SELECTED FELLOWSHIPS AND AWARDS

Hubble Fellowship, Princeton University, 2017

Lyman Spitzer, Jr. Fellowship, Princeton University, 2017

Einstein Fellowship, The Ohio State University (declined), 2017

College of Science Graduate Student Research Prize, University of Arizona, 2015

Theoretical Astrophysics Program Graduate Student Research Prize, University of Arizona, 2014

NSF Graduate Research Fellowship, University of Arizona, 2011

Gertrude Slaughter Fellowship, Bryn Mawr College, 2010

Elizabeth S. Shippen Scholarship in Science, Bryn Mawr College, 2009

CONFERENCES AND TALKS

- AAS-Grapevine, dissertation talk, Jan. 2017
- Lunch seminar, Center for Computational Astrophysics, Flatiron Institute *invited talk*, Nov. 2016
- TAPIR seminar, Caltech, *invited talk*, Oct. 2016
- IMPS seminar, University of California Santa Cruz, Oct. 2016
- TAP seminar, University of California Berkeley, *invited talk*, Oct. 2016
- ITC Galaxy and Cosmology seminar, Harvard-Smithsonian CfA, *invited talk*, Sep. 2016
- CITA seminar, University of Toronto, Sep. 2016
- SFIR seminar, Princeton University, Sep. 2016
- CIERA seminar, Northwestern University, *invited talk*, Aug. 2016
- Massive Beasts of the Cosmos Conference, South Africa, contributed talk, Jul. 2016
- What Shapes Galaxies Conference, Space Telescope Institute, contributed poster, Apr. 2016
- Santa Cruz Galaxy Workshop, University of California Santa Cruz, contributed talk, Aug. 2015
- CGM@50 Conference, Italy, contributed poster, Jun. 2015
- NVIDIA seminar, University of Arizona, *invited talk*, May 2015
- CCAPP seminar, The Ohio State University, Apr. 2015
- Naval Research Laboratory lunch talk, Washington DC, *invited talk*, Jan. 2015
- TAP Prize Lecture, University of Arizona, *invited talk*, Dec. 2014
- AAS-Austin, poster presentation, Jan. 2012
- AAS-Washington DC, poster presentation, Jan. 2010
- AAS-Long Beach, poster presentation, Jan. 2009

PROFESSIONAL EXPERIENCE

Software Development

CHOLLA: Primary code architect and developer, *Cholla* hydrodynamics code
url: <http://github.com/cholla-hydro/cholla>

Computational

Oak Ridge National Lab – Titan: 46 million hours (INCITE program Ast 125, co-PI)
Stanford – XStream: 90,000 SUs (XSEDE program Ast 160039, co-PI) est. value \$1,605.
Oak Ridge National Lab – Titan: 6 million hours (INCITE DDT programs Ast 107 & 119, co-PI)
Experience with C, C++, CUDA C, IDL, Python

Observing

MMT – Hectospec: 1 night
Magellan – MMIRS: 2 nights
Green Bank Telescope: 1 night

Service

Referee: The Astrophysical Journal, MNRAS
Graduate Admissions Committee Member, University of Arizona Astronomy Department, Jan. 2014
Graduate Council Member, University of Arizona Astronomy Department, 2012 - 2014
Prospective Graduate Student Visit Coordinator, University of Arizona Astronomy Department, Mar. 2013

Professional Development

Argonne Training Program on Extreme Scale Computing, Aug. 2016
Supercomputing 2015 Conference & Tutorials, Nov. 2015
International High Performance Computing Summer School, Jun. 2014

COMMUNITY ACTIVITIES AND OUTREACH

- Space Drafts (Astronomy on Tap Tucson) Co-Organizer, Spring 2015 - Summer 2017
 - University of Arizona Astronomy Graduate Mentoring Program Coordinator, Fall 2014 - Present
 - University of Arizona Student Fees Committee Member, 2012 - 2014
 - Regular Author and Editorial Board member, Astrobites Blog, 2011 - 2014
 - Expanding Your Horizons Science Workshop, Fall 2011, Spring 2011, Spring 2012, Fall 2013
 - University of Arizona Graduate and Professional Student Council, College of Science Representative, 2011 - 2013
 - University of Arizona Library Advisory Council Member, 2011 - 2013
 - Tucson Women in Astronomy Undergraduate Mentoring Coordinator, 2011 - 2012
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TEACHING EXPERIENCE

- Instructor, Pima Community College, Summer 2017
Sole instructor for a ~30 student section of Astronomy 101. Course included twice weekly lectures, as well as a weekly lab component.
- Guest Lectures for Undergraduate Courses, University of Arizona, 2014-2017
ASTR 296A - Topics in Astronomical Research
ASTR 400B - Galactic and Extragalactic Astrophysics
- Teaching Assistant, University of Arizona, Spring 2017
Sole teaching assistant for the ~30 student Physics 305 Computational Physics course taught by Dr. Philip Pinto. Lectured six times, assisted with in-class assignments, held office hours, and graded coding assignments.
- Teaching Assistant, University of Arizona, Fall 2014
Sole teaching assistant for a ~150 student section of Astronomy 170B taught by Dr. Don McCarthy. Led study sessions, held office hours, and lectured on occasion.
- Recitation Leader, Bryn Mawr College, Fall 2008 / Spring 2009
Led study sessions for the undergraduate Physics 101/102 course twice a week, creating lesson plans and worksheets, and giving students one-on-one assistance when requested.
- Physics Lab TA, Bryn Mawr College, Fall 2007, Spring 2008, Fall 2009
Monitored introductory physics lab, answering student questions, grading labs.
- Peer Tutor, Bryn Mawr College, 2007 - 2010
Tutored students one-on-one once or twice a week in physics or calculus.

SUBMITTED AND REFEREED PUBLICATIONS

11. *Hydrodynamical Coupling of Mass and Momentum in Multiphase Galactic Winds*
Schneider, Evan E. & Robertson, Brant E. 2017, ApJ, Volume 834, 144.
10. *Cholla: A New Massively-Parallel Hydrodynamics Code For Astrophysical Simulation*
Schneider, Evan E. & Robertson, Brant E. 2015, ApJS, Volume 217, Issue 2, 24.
9. *Steps Toward Unveiling the True Nature of Active Galactic Nuclei: Photometric Characterization of Active Galactic Nuclei in COSMOS*
Schneider, Evan E. Impey, C. D., Trump, J. R., Salvato, M. 2013, ApJ, Volume 766, Issue 2, 123.
8. *The 2012 Hubble Ultra Deep Field (UDF12): Observational Overview*
Koekemoer, A. M., Ellis, R. S. McLure, R. J., Dunlop, J. S., Robertson, B. E., Ono, Y., Schenker, M. A., Ouchi, M., Bowler, R. A., Rogers, A. B., Curtis-Lake, E., **Schneider, E. E.**, Charlot, S., Stark, D. P., Furlanetto, S. R., Cirasuolo, M., Wild, V., Targett, R. 2013, ApJS, Volume 209, Issue 1.
7. *Evolution of the Sizes of Galaxies over $7 < z < 12$ Revealed by the 2012 Hubble Ultra Deep Field Campaign*
Ono, Y., Ouchi, M., Curtis-Lake, E., Schenker, M. A., Ellis, R. S., McLure, R. J., Dunlop, J. S., Robertson, B. E., Koekemoer, A. M., Bowler, R. A., Rogers, A. B., **Schneider, E. E.**, Charlot, S., Stark, D. P., Shimasaku, K., Furlanetto, S. R., Cirasuolo, M. 2013, ApJ, Volume 777, Issue 2.
6. *The UV Continua and Inferred Stellar Populations of Galaxies at $z = 7 - 9$ Revealed by the Hubble Ultra-Deep Field 2012 Campaign*
Dunlop, J. S., Rogers, A. B., McLure, R. J., Ellis, R. S., Robertson, B. E., Koekemoer, A., Dayal, P., Curtis-Lake, E., Wild, V., Charlot, S., Bowler, R. A. A., Schenker, M. A., Ouchi, M., Ono, Y., Cirasuolo, M., Furlanetto, S. R., Stark, D. P., Targett, T. A., **Schneider, E. E.** 2013, MNRAS, Volume 432, Issue 4.
5. *The UV Luminosity Function of Star-forming Galaxies via Dropout Selection at Redshifts $z \sim 7$ and 8 from the 2012 Ultra Deep Field Campaign*
Schenker, M. A., Robertson, B. E., Ellis, R. S., Ono, Y., McLure, R. J., Dunlop, J. S., Koekemoer, A., Bowler, R. A. A., Ouchi, M., Curtis-Lake, E., Rogers, A. B., **Schneider, E. E.**, Charlot, S., Stark, D. P., Furlanetto, S. R., Cirasuolo, M. 2013, ApJ, Volume 768, Issue 2.
4. *New Constraints on Cosmic Reionization from the 2012 Hubble Ultra Deep Field Campaign*
Robertson, B. E., Furlanetto, S. R., **Schneider, E. E.**, Charlot, S., Ellis, R. S., Stark, D. P., McLure, R. J., Dunlop, J. S., Koekemoer, A., Schenker, M. A., Ouchi, M., Ono, Y., Curtis-Lake, E., Rogers, A. B., Bowler, R. A. A., Cirasuolo, M. 2013, ApJ, Volume 768, Issue 1.
3. *The Abundance of Star-forming Galaxies in the Redshift Range 8.5-12: New Results from the 2012 Hubble Ultra Deep Field Campaign*
Ellis, R. S., McLure, R. J., Dunlop, J. S., Robertson, B. E., Ono, Y., Schenker, M. A., Koekemoer, A., Bowler, R. A. A., Ouchi, M., Rogers, A. B., Curtis-Lake, E., **Schneider, E. E.**, Charlot, S., Stark, D. P., Furlanetto, S. R., Cirasuolo, M. 2013, ApJL, Volume 763, Issue 1.

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2. *TW Hya: Spectral Variability, X-Rays, and Accretion Diagnostics*
Dupree, A. K., Brickhouse, N. S., Cranmer, S. R., Luna, G. J. M., **Schneider, E. E.**, Bessell, M. S., Bonanos, A., Crause, L. A., Lawson, W. A., Mallik, S. V., Schuler, S. C. 2012, ApJ, Volume 760, Issue 1.
 1. *Methyl Group Rotation, ^1H Spin-lattice Relaxation in an Organic Solid, and the Analysis of Nonexponential Relaxation*
Beckmann, P. A. & **Schneider, E. E.** 2012, Journal of Chemical Physics, Volume 136, Issue 5.