

## Contact

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## Education

- 2017      **Pennsylvania State University**, State College, PA  
Dual PhD, Astronomy and Astrophysics and Astrobiology  
“A Synergistic Approach to Interpreting Planetary Atmospheres”  
Supervised by James F. Kasting, Steinn Sigurdsson
- 2013      **Cornell University**, Ithaca, NY  
B.A., Physics  
**University of New South Wales**, Sydney, Australia  
Abroad Honors Thesis, Physics and Astronomy

## Appointments

- 2017-present      **Space Telescope Science Institute**, Baltimore, MD  
Postdoctoral Fellow in Science Mission Office
- 2013      **Space Telescope Science Institute**, Baltimore, MD  
Space Astronomy Summer Program
- 2011      **Goddard Space Flight Center**, Greenbelt, MD  
Undergraduate Research Associates in Astrobiology
- 2009-2013      **Spacecraft Planetary Imaging Facility**, Ithaca, NY  
Assistant Manager

## Awards and Fellowships

- 2017      Ford Foundation Fellowship, Honorable Mention
- 2016-2017      Alfred P. Sloan Foundation’s Minority Graduate Scholarship, \$40k
- 2016      Kavli Student Fellow, \$2k
- 2015      NAI Early Career Collaboration Award, \$5k
- 2015      Stephen B. Brumbach Graduate Fellowship in Astrophysics, \$4k
- 2014-2017      National Science Foundation Graduate Research Fellowship, \$32k/yr
- 2013      STEM Scholar Graduate Fellow, \$28k
- 2012      Douglas and Dorothy K. Wood Scholarship, \$5k
- 2011      NASA/NY Space Grant Consortium, \$5k

## Refereed Publications

- 2018      **Batalha, N.E.**, et al., *Reply to Shaw*. *EPSL*, 484, 415-417

Blumenthal, S., Mandell, A., Herbrard, E., **Batalha, N.E.**, et al. *Comparison of Simulated JWST Observations Derived from Equilibrium and Non-Equilibrium Chemistry Models of Giant Exoplanets*, *ApJ* <https://arxiv.org/abs/1712.01121>

- 2017 Kopparapu, R., Wolf, E., Arney, G., **Batalha, N.E.**, et al., *Habitable Moist Atmospheres on Terrestrial Planets Near the Inner Edge of the Habitable Zone around M-Dwarfs*. ApJ, <https://arxiv.org/abs/1705.10362>
- Christiansen, J., 27 others, **Batalha, N.E.**, et al., *Three's Company: An Additional Non-Transiting Super-Earth in the Bright HD 3167 System, and Masses for All Three Planets*, AJ, <https://arxiv.org/abs/1706.01892>
- Batalha, N.E.**, et al., *PandExo: A Community Tool for Exoplanet Science with the JWST and HST*. PASP, 129, 976 <https://arxiv.org/abs/1702.01820>
- Batalha, N.E.**, Kempton, E., & Mbarek, R., *Challenges in Constraining Exoplanet Masses via Transmission Spectroscopy*, 2017, ApJL, 836, L5, <https://arxiv.org/abs/1701.00012>
- Batalha, N.E.**, & Line, M.R., *Information Content Analysis for Selection of Optimal JWST Observing Modes for Transiting Exoplanet Atmospheres*. ApJ, 153, 4, <https://arxiv.org/abs/1612.02085>
- 2016 **Batalha, N.E.**, et al., *Climate Cycling on Early Mars Caused by the Carbonate-Silicate Cycle*. EPSL, 455, 7-13 <https://arxiv.org/abs/1609.00602>
- Haqq-Misra, J., Kopparapu, R., **Batalha, N.E.**, et al. *Limit Cycles Can Reduce the Width of the Habitable Zone*, ApJ, <https://arxiv.org/abs/1605.07130>
- 2015 **Batalha, N.E.**, et al., *Testing the Early Mars H<sub>2</sub>-CO<sub>2</sub> Greenhouse Hypothesis with a 1-D Photochemical Model*. Icarus, 258, 337-349 <https://arxiv.org/abs/1507.02569>
- Cowan, N.B, Greene, T., Angerhausen, D., **Batalha, N.E.** et al. *Characterizing Transiting Planet Atmospheres Through 2025*. PASP, 127, 949 <https://arxiv.org/abs/1502.00004>
- 2014 **Batalha, N.E.**, et al. *Transiting Exoplanet Simulations with the James Webb Space Telescope*. JWST White Paper, <https://arxiv.org/abs/1507.02655>
- 2011 Agueros, M., Covey, K., 3 others, **Batalha, N.E.** et al., *The Factory and the Beehive. I. Rotation Periods of Low-Mass Stars in Praesepe* Apj, 740, 110

### Accepted Proposals

- 2017 Co-Investigator, HST-GO-14918 (10 orbits) *Definitive Measurement of WASP-17b's Water Abundance in Preparation of JWST*, PI: Wakeford

### Teaching & Mentoring

- 2017 K-12 Instructor at Project Favela Rocinha, Rio de Janeiro, Brazil
- 2013-2017 Mentored students from underserved backgrounds through Learn to Be Foundation 501(c)(3) nonprofit

### Education and Public Outreach

#### *Involvement in Media and Online Content*

- 2017 AAAS Catalyzing Advocacy in Science and Engineering  
<https://www.aaas.org/page/about-0e>
- 2014-2016 Astrobites Writer & Editor  
<http://astrobites.com/author/nbatalha>

- 2014-2015 NASA FameLab Science Communication  
<https://www.youtube.com/watch?v=ioNSVINsW9I>  
[https://www.youtube.com/watch?v=T\\_7wlmzbLCs](https://www.youtube.com/watch?v=T_7wlmzbLCs)  
<https://www.youtube.com/watch?v=dLrjPr6SFtA>
- 2014-2015 New York Film Academy Science Animation Advisor  
<http://sites.psu.edu/natashabatalha/nyfa-animations/>

*Involvement with Groups Underrepresented in STEM*

- 2014-2017 Instructor for Centre County Prison Society Education Program  
 2013-2017 Director of Programs, Learn to Be Foundation 501(c)(3) nonprofit  
 2014-2015 Graduate Women in Science Girl Scout Co-Chair  
 2014 McNair Scholar Graduate Student Panelist

*Involvement in Education: Curriculum, Teachers, Training*

- July 2015 High School and Middle School Teacher Workshop, State College, PA

**Conference Presentations, Seminars, Colloquia**

*Invited Talks*

- Jul. 2017 Enabling Transiting Exoplanet Observations with JWST, STScI  
*Introduction to PandExo*
- Apr. 2016 Department of Terrestrial Magnetism, Carnegie Institute  
*Transiting Exoplanet Science with the James Webb Space Telescope*
- Aug. 2016 Planetary Systems: A Synergistic View, Quy Nhon, Vietnam  
*Transiting Exoplanet Science with the James Webb Space Telescope*
- May 2015 Penn State Board of Visitors, University Park, PA  
*How to search for life when we don't know what we are looking for*
- May 2015 Penn State Dean of Eberly College of Science Advisory Committee  
*How to search for life when we don't know what we are looking for*

*Contributed, Seminar & Colloquia*

- Jan. 2018 Winter AAS Conference, Washington DC  
*Optimal Strategies for Probing Terrestrial Atmospheres with JWST*
- Feb. 2017 School of Earth and Space Exploration, Arizona State University, Seminar  
*Transiting Exoplanet Science with the James Webb Space Telescope*
- Jan. 2017 Winter AAS Conference, Grapevine, Texas  
*Key Exoplanets in the JWST Era*
- Oct. 2016 Division of Planetary Sciences Conference, Pasadena, CA  
*Climate Cycling on Early Mars via the Carbonate Silicate Cycle*
- Feb. 2016 Jet Propulsion Laboratory, Seminar  
*Transiting Exoplanet Science with the James Webb Space Telescope*
- Mar. 2016 Goddard Space Flight Center, Greenbelt, MD, Seminar  
*A Community Tool for Exoplanet Science with JWST*
- Mar. 2016 Center for Exoplanets and Habitable Worlds, Penn State, Seminar  
*A Community Tool for Exoplanet Science with JWST*
- Mar. 2015 Center for Exoplanets and Habitable Worlds, Penn State University, Seminar  
*Testing the Early Mars H<sub>2</sub>-CO<sub>2</sub> Greenhouse Hypothesis*

- Jan. 2014 Winter AAS Conference, Washington, DC  
*Transiting Exoplanet Simulations with JWST*
- Aug. 2013 Space Telescope Science Institute, Seminar  
*Using NIRISS and NIRSpec for Transiting Exoplanet Science*
- Oct. 2012 Cornell Planet Lunch Series, Ithaca, NY, Seminar  
*Characterizing Transiting Exoplanet GJ1214b with KECK II*

*Contributed Posters*

- Mar. 2016 Linking Disks and Exoplanet Compositions Workshop, Baltimore, MD  
*A Community Tool for Exoplanet Characterization with JWST*
- Mar. 2014 Exoplanet, Biosignatures & Instrumentation, Tucson, AZ  
*Warming Early Mars with  $H_2$  and  $CO_2$*
- Mar. 2014 Exoplanet, Biosignatures & Instrumentation, Tucson, AZ  
*Characterizing Exoplanets with JWST*

**Service**

- 2017 Referee, ApJ, ApJL
- 2014 ExoPAG: Science Analysis Group 10: Characterizing Exoplanets through 2025
- 2014 Emerging Researchers in Exoplanets Science Symposium Organizing Committee
- 2014 Astrobiology Graduate Conference Organizing Committee