

Juan A. Crespo, Ph.D.

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Professional Experience

JPL Postdoctoral Fellow Aug. 2018 — Present
NASA Jet Propulsion Laboratory, California Institute of Technology

Postdoctoral Research Fellow May 2018 — Aug. 2018
Dept. of Climate & Space Sciences & Engineering, University of Michigan

Graduate Student Research Assistant Sept. 2013 — Apr. 2018
Atmospheric Observations, Simulations & Statistics (AOSS) Group, University of Michigan

Education

University of Michigan, *Ann Arbor, Michigan*

Ph.D., Atmospheric & Climate Sciences April 2018
Dissertation: *Exploring New Satellite Technology for Extratropical Cyclone and Surface Heat Flux Analysis*
Committee Co-Chairs: Drs. [Derek J. Posselt](#) & [Christopher S. Ruf](#)

M.S., Atmospheric Science April 2015

Purdue University, *West Lafayette, Indiana*

B.S., Atmospheric Science/Meteorology with Honors May 2013
Minor: Political Science

Teaching Experience

Grader: CLIMATE 102 — Extreme Weather Fall 2017
Graduate Student Instructor: CLIMATE 102 — Extreme Weather Fall 2016
Grader: AOSS 411 — Cloud and Precipitation Processes Winter 2016
Grader: AOSS 401 — Geophysical Fluid Dynamics Fall 2015
Supplemental Instruction Leader: MA 161 — Calculus I 2011-2012

Publications

Crespo, J.A., D.J. Posselt, and S. Asharaf, 2019: [CYGNSS Surface Heat Flux Product Development](#). *Remote Sens.*, **11**, 2294, doi: 10.3390/rs11192294.

Crespo, J.A., D.J. Posselt, C.M. Naud, and C. Bussy-Virat, 2017: [Assessing CYGNSS's Potential to Observe Extratropical Fronts and Cyclones](#). *J. Appl. Meteorol. Climatol.*, **56**, 2027-2034, doi:10.1175/JAMC-D-17-0050.1.

Crespo, J.A. & D.J. Posselt, 2016: [A-Train Based Case Study of Stratiform – Convective Transition within a Warm Conveyor Belt](#). *Mon. Wea. Rev.*, **144**, 2069-2084, doi: 10.1175/MWR-D-15-0435.1.

Recent Conference Presentations

Crespo, J.A., C.M. Naud, and D.J. Posselt, *CYGNSS Observations and Analysis of Surface Heat Fluxes in Low Latitude Extratropical Cyclones*. Talk presented at the 19th Cyclone Workshop, Seon, Bavaria, Germany. October 2019.

- Crespo, J.A.** & D.J. Posselt, *Development & Early Results of the Surface Heat Flux Product for the CYGNSS Mission*. Poster presented at the 2019 International Ocean Vector Winds Science Team Meeting, Portland, ME. May 2019.
- Crespo, J.A.**, D.J. Posselt, & S. Asharaf, *Surface Heat Flux Analysis and Products for the CYGNSS Mission*. Talk presented at the 23rd IOAS-AOLS Conference at the 99th American Meteorological Society Annual Meeting, Phoenix, AZ. January 2019.
- Crespo, J.A.**, D.J. Posselt, & S. Asharaf, *CYGNSS Surface Heat Flux Product Development*. Poster presented at the American Geophysical Union 2018 Fall Meeting, Washington, DC. December 2018.
- Crespo, J.A.** & D.J. Posselt, *Developing a Surface Heat Flux Product for the CYGNSS Satellite Mission*. [Talk presented at the 21st conference on Air-Sea Interaction](#), Oklahoma City, OK. June 2018.
- Crespo, J.A.** & D.J. Posselt, *CYGNSS Observations of Low-Latitude Extratropical Cyclones and Estimates of Surface Heat Fluxes*. [Talk presented at the 22nd Conference on Satellite Meteorology and Oceanography](#) at the 98th American Meteorological Society Annual Meeting, Austin, TX. January 2018.
- Crespo, J.A.**, D.J. Posselt, C.M. Naud, & C.D. Bussy-Virat, *CYGNSS Sampling of Low-Latitude Extratropical Cyclones & Surface Heat Flux Estimates*, Talk presented at the 2017 International Ocean Vector Winds Science Team Meeting, San Diego, CA. May 2017.
- Crespo, J.A.** & D.J. Posselt, *Exploring the use of CYGNSS for Surface Flux Estimation in Extratropical Cyclones*, [Talk presented at the Joint 21st Satellite Meteorology, Oceanography and Climatology Conference and 20th Conference on Air-Sea Interaction](#), Madison, WI. August 2016.
- Crespo, J.A.** & D.J. Posselt, *Satellite-Based Analysis of a Warm Conveyor Belt in a Marine Extratropical Cyclone*, Talk presented at the American Geophysical Union 2015 Fall Meeting, San Francisco, CA. December 2015.

Honors and Awards

Engineering Graduate Symposium Technical Session Award 1 st Place in Atmospheric & Climate Sciences	November 2014
College of Engineering Dean's Fellowship	September 2013
American Meteorological Society Named Senior Scholarship	September 2012
Purdue University's Featured "5 Students Who..."	March 2012
President Obama/HSF STEM Teacher Scholarship	October 2011

Professional Affiliations

American Meteorological Society (AMS)	2009 — Present
American Geophysical Union (AGU)	2015 — Present

Service & Development

Parish Pastoral Council: St. Francis of Assisi, Ann Arbor, MI <i>Chair</i>	2014 — 2018 2017 — 2018
Author, Manager, and Editor : Hammer & Rails	2011 — Present
Board Member: Purdue Alumni Club of Southeast Michigan	2016 — 2017
Resident Assistant: Purdue University	2012 — 2013