

CONTACT
INFORMATION

SETI Institute
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EDUCATION

New Mexico State University (NMSU), Las Cruces, NM

- Ph.D., Astronomy. September 2012.
- M.S., Astronomy, with Honors. May 2010.

Emory University, Atlanta, GA

- B.S., Physics & Astronomy, Minor in Spanish, Summa cum Laude. May 2007.

AWARDS

NASA's Exceptional Engineering Achievement Medal (2016)

- For leadership and innovation in the construction of the first uniform *Kepler* planet candidate catalog.

SPECIAL
SKILLS

Computing and Programming

- Professional use of C/C++, Python, MATLAB, AWK, Unix tools and shell scripting, HTML/CSS/CGI, JIRA, GIT, SVN, Gnuplot, L^AT_EX, Word/Excel, Linux, Mac OSX, and Windows.
- Special experience with workflow automation, pipeline validation, optimization of multi-parameter models, genetic algorithms, large dataset processing, PCA/SVD, and robust statistical inference.

Technical Communication ([Link to List](#))

- 12 first-author and 20⁺ co-author publications in peer-reviewed journals.
- 20⁺ first-author talks and posters at professional conferences and academic colloquia.
- 10⁺ Public lectures and media interviews.

Foreign Languages

- Spanish: Professional working proficiency both written and spoken.

RESEARCH
AND
WORK
APPOINTMENTS

SETI Institute and NASA AMES for the Kepler & K2 Missions

- NASA's Kepler Mission used a space-based telescope to monitor ~200,000 stars near Cygnus for four years to discover Earth-like and other planets and find out how many may exist in our galaxy.
- NASA's K2 Mission uses the same spacecraft to monitor tens of thousands of astrophysical objects at a time in multiple locations for ~90 days at a time, enabling research on planets, stars, and galaxies.

Director of the Kepler/K2 Science Office

July 2017 to Present

- I direct the operations of the Kepler/K2 Science Office, coordinating with numerous internal and external groups, to ensure the highest quality data is obtained from the K2 mission and provided to the Astronomical community along with thorough documentation. I lead regular meetings, organize personal workloads, manage project schedules, track and present progress, facilitate team communication, and promote a customer-oriented culture with a focus on lean techniques.

Kepler Science Office Support Scientist

Nov 2012 to June 2017

- My main role was to lead the team that reviewed candidate planetary transit signals. I developed algorithms and software products to support operational decision making in the classification of these planetary signals. Utilizing human and automated vetting techniques, alongside emulation of true and false positives, we statistically validated the Kepler pipeline and created robust planet catalogs sufficient for accurate occurrence rate determinations. As part of the science team, I also helped prioritize our research to meet mission deadlines, communicated our progress to management, and worked with NASA archives to properly archive and document our results.

New Mexico State University, Las Cruces, NM

NSF Graduate Research Fellow

May 2009 to Oct 2012

- I conducted research on extrasolar planets and eclipsing binary stars in collaboration with domestic and international Astronomers. I focused on automated detection methods and robust modeling and statistical inference for the determination of stellar and planetary parameters.