

Paul Fredrick Wren

Mars Space Flight Facility, Arizona State University
<https://kactuswren.github.io>

EDUCATION

University of North Dakota, Grand Forks, North Dakota

Department of Space Studies

Master of Science, Advisor: Dr. Ronald Fevig (May 2018)

Arizona State University, Tempe, Arizona

Bachelor of Arts, Anthropology (August 2011)

Bachelor of Science, Computer Science (May 1985)

EXPERIENCE

Adjunct Astronomy Faculty, Chandler-Gilbert Community College (October 2018-present)

Scientific Software Engineer, Mars Space Flight Facility, Arizona State Univ. (2014-present)

Developing mission planning and visualization software for ongoing and future missions:

- MARS ODYSSEY, Thermal Emission Imaging System (THEMIS)
- OSIRIS-REx
- EMM, Emirates Mars Infrared Spectrometer
- Europa Clipper, E-THEMIS

Telescope Observations

KPNO: Speckle Interferometry of Binary Stars, NOAO #2013B-0064 (October 2013)

Senior Principal Engineer, Performance Software Corp, Phoenix, AZ (2003-2014)

Systems and software engineering of avionics systems for commercial aircraft.

Principal Engineer, Honeywell International, Phoenix, AZ (1987-2003)

Systems and software development of Flight Management and Maintenance systems.

Software Engineer, Lear Siegler Incorporated, Grand Rapids, MI (1985-1987)

Software development of software tools for avionics development.

COURSES TAUGHT

AST 101/102	Survey of Astronomy (lecture and lab)
AST 111	Introduction to Solar System Astronomy

HONORS AND AWARDS

2018 **Graduate Student of the Year**, Department of Space Studies, Univ. of North Dakota

2017 **NASA Group Achievement Award** for OSIRIS-REx

PROFESSIONAL AND UNIVERSITY SERVICE

- 2019 Panelist on NASA Review Panel
2019 Staff sponsor for STEM Gaming Club
2017 Hosted JMARS table at ASU's Night of the Open Door

PROFESSIONAL MEMBERSHIP

American Astronomical Society Division of Planetary Sciences
American Geophysical Union
Planetary Crater Consortium

NASA/ADS ENTRIES

- Wren, P. F.**, & Fevig, R. A. (2019), Comparing Small Main Belt Binary Asteroids of the Inner and Intermediate Zones Using Doublet Craters on Vesta and Ceres. Lunar and Planetary Science Conference, 3095.
- Wren, P.**, & Fevig, R. A. (2018), Comparing Doublet Craters on Vesta and Ceres to Investigate Binary Asteroid Differences Between Inner and Intermediate Zones of the Main Belt. AGU Fall Meeting Abstracts, 2018, P33D-3871.
- Wren, P. F.**, & Fevig, R. A. (2018), Using Doublet Craters on Ceres to Constrain the Main Belt Binary Asteroid Population. Lunar and Planetary Science Conference, 2328.
- Wren, P. F.** (2018), Constraining the Small Binary Asteroid Population of the Main Belt Using Doublet Craters on Ceres. Masters Thesis, University of North Dakota.
- Wren, P.**, & Fevig, R. A. (2017), Constraining the Main Belt Binary Asteroid Population Using Doublet Craters on Ceres. AGU Fall Meeting Abstracts, 2017, P43A-2872.
- Wren, P. F.**, & Fevig, R. A. (2017), Investigation of Doublet Craters on Ceres as Evidence of Main Belt Binary Asteroid Systems. Lunar and Planetary Science Conference, 2407.
- Genet, R. M., Rowe, D., Smith, T. C., Teiche, A., Harshaw, R., Wallace, D., Weise, E., Wiley, E., Boyce, G., Boyce, P., Branston, D., Chaney, K., Clark, R. K., Estrada, C., Frey, T., Estrada, R., Green, W., Haurberg, N., Kenney, J., Jones, G., Loftin, S., McGieson, I., Patel, R., Plummer, J., Ridgely, J., Trueblood, M., Westergren, D., & **Wren, P.** (2015), Kitt Peak Speckle Interferometry of Close Visual Binary Stars. Journal of Double Star Observations, 11, 234.
- Wren, P. F.**, Fevig, R. A., Kaabouch, N., Nelson, M. E., Bourbour, F., Snarr, J. W., Ghosh, D., & Church, C. (2015), R2S: A Technology Demonstrator for NEO Reconnaissance Mission. Spacecraft Reconnaissance of Asteroid and Comet Interiors, 1829, 6033.

Noviello, J. L., Ying, X. Y., **Wren, P. F.**, Stinnett, B. L., Akshay, R. T., Karjigi, S., Ridge, M. G., Koganti, P., & Castillo, J. C. (2015), The Reconnaissance of Apophis (RA) Picosatellite Mission Concept. Spacecraft Reconnaissance of Asteroid and Comet Interiors, 1829, 6031.

Genet, R. M., Hartkopf, W. I., Clark, R. K., Hardersen, P., **Wren, P.**, Wallace, D., & Gelston, R. (2013), Speckle Interferometry and Photometry of Binary Stars. NOAO Proposal 2013B-0064.