

Richard G. Jerousek, Ph.D.

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Lecturer/Researcher

Physics Department

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Education.

University of Central Florida, Orlando, FL PhD – Physics	2018
University of Central Florida, Orlando, FL MS – Physics	2008
University of Central Florida, Orlando, FL BS – Physics, Minor: Mathematics	2006

Research.

Florida Space Institute, Orlando, FL. Researcher	2018 – present
Co-Inv. Cassini Data Analysis Program (CDAP) <i>Mesoscale Structures in Saturn's Rings</i>	2020 – 2023
Co-Inv. Hubble Space Telescope Cycle 25 GO Program: <i>15094–Stellar Occultation by Saturn's Rings in the UV</i>	2018
University of Central Florida Physics Department, Orlando, FL. Researcher – Cassini UVIS	2009 – 2014
<i>(Ultraviolet Imaging Spectrograph), UCF/LASP:University of Colorado</i>	2009 – 2014

Teaching.

Courses taught:

Physics I with Calc. (PHY 2048),

Physics II with Calc. (PHY 2049), Honors Physics II with Calc. (PHY 2049H)

Physics I with Alg./Trig. (PHY 2053)

Physics II with Alg./Trig. (PHY 2054)

Intro. to Astronomy (AST 1002): face-to-face and online only courses

Honors Intro. To Astronomy (AST 1002H)

Selected Topics in Physics (PHY 2936)

University of Central Florida Physics Department, Orlando, FL. Lecturer	2020 – present 2020 - present
Valencia College West Campus Science Division, Orlando, FL. Tenure-Track Professor	2009 – 2020 2018 – 2020
Professor (8-month contract, ann. renewed)	2013 – 2018
Physics Laboratory Instructor/Adjunct Instructor	2009 – 2013
University of Central Florida Physics Department, Orlando, FL. Graduate Teaching Assistant – <i>Laboratory Instructor (PHY 2053)</i>	2004 – 2007 2006 – 2007
Undergraduate Teaching Assistant – <i>Physics and Films (PSC 1801)</i>	2004 – 2005

Professional and College Service Activities

Session Chair: Rings, Micrometeoroids, and Dust (2020 AGU Fall Meeting)	2020
Judge – Outstanding Student Presentation Award (2019 AGU Fall Meeting)	2019
Valencia Science Speaker Series – <i>The Saturn System Through the Compound Eyes of Cassini</i>	2018
The Nook on Robinson Speaker Series – <i>Saturn's Rings from Cassini</i>	2018
Advisor of Valencia Astronomy Club/Organizer Valencia Astronomy Nights	2016 – 2020
Valencia College West Campus Hiring Committee – <i>Lab managers/adjunct professors</i>	2016 – 2020
Valencia College General Education Curriculum Committee	2015 – 2016
<i>Course Outlines PHY 2048C, PHY 2049C, AST 1002</i>	
Orlando Science Center – <i>Observatory Operator</i>	2005 – 2006

Peer-Reviewed Publications.

- Jerousek, R.G., Colwell, J.E., Hedman, M.M., French, R.G., Marouf, E.A., Esposito, L.W., Nicholson, P.D. (2020) Saturn's C Ring and Cassini Division: Particle Sizes from Cassini UVIS, VIMS, and RSS Occultations. *Icarus*. In Press. doi:10.1016/j.icarus.2019.113565
- Tiscareno, M. S., Burns, J.A., Colwell, J. E., Cuzzi, J.N., Hedman, M.M., Murray, C. M., Nicholson, P. D., Spilker L., J., Baker, E. J., Brooks, S. M., Clark, R. N., Cooper, N. J., Deau, E., Filacchione, G., Jerousek, R. G., Le Mouelic, S., Morishima, R., Pilorz, S. Rodriguez, S. (2019) Close-range remote sensing of Saturn's rings during Cassini's ring grazing orbits and grand finale. *Science*. 364 (6445) eaau1017, doi:10.1126/science.aau1017
- Jerousek, R.G., Colwell, J.E., Esposito, L.W., Nicholson, P.D., Hedman, M.M. (2016) Small Particles and Self-Gravity Wakes in Saturn's Rings from UVIS and VIMS Stellar Occultations. *Icarus*. 279 36-50. doi:10.1016/j.icarus.2016.04.039
- Jerousek, R.G., Colwell, J.E., Esposito, L.W. (2011) Morphology and Variability of the Titan Ringlet and Huygens Ringlet Edges. *Icarus*. 216, 280-291. doi:10.1016/j.icarus.2011.09.001
- Esposito, L.W., Albers, N., Meinke, B.K., Sremčević, M., Madhusudhanan, P., Colwell, J.E., Jerousek, R.G. (2012) A Predator–Prey Model for Moon-triggered Clumping in Saturn's Rings. *Icarus* 217, 103-114. doi:10.1016/j.icarus.2011.09.029
- Colwell, J.E., Esposito, L.W., Jerousek, R.G., Pettis, D., Sremčević, M., Bradley, E.T. (2010) Cassini UVIS Stellar Occultation Observations of Saturn's Rings. *Astronomical Journal* 140, 1569.

Invited Conference Talks.

- Jerousek, R.G., Colwell, J.E., Hedman, M.M., French, R.G., Marouf, E.A., Esposito, L.W., Nicholson, P.D. *Particle sizes in Saturn's rings from Cassini UVIS, VIMS, and RSS Occultations*. American Geophysical Union, Fall Meeting 2019, abstract # P21B-02, San Francisco, CA. December 2019.
- Jerousek, R. G., Colwell, J. E., Esposito, L. W., Hedman, M. M., Nicholson, P. D. (2015, December) *Particle Sizes and Self-Gravity Wakes in Saturn's A Ring*. Paper presented at the American Geophysical Union, Fall Meeting 2015, abstract #P43E-04. San Francisco, CA. December 2015.

Other Conference Talks.

- Colwell, J.E., Jerousek, R.G., Lewis, M., Aye, K.M, Tiscareno, M.S. Esposito, L.W., *Mesoscale Structures in Saturn's Rings from Cassini UVIS Stellar Occultation Data* American Geophysical Union, Fall Meeting 2019, abstract # P23C-3505, San Francisco, CA. December 2019.
- Jerousek, R.G., *Aggregates and non-axisymmetric meso-scale structures in Saturn's rings from UVIS stellar occultations*. Paper presented at the Biannual Cassini UVIS meeting, Laboratory of Atmospheric and Space Physics (LASP), Boulder, CO. August 2019.
- Jerousek, R.G., Colwell, J.E., Hedman, M.M., French, R.G., Marouf, E.A., Esposito, L.W., Nicholson, P.D. *Particle Sizes and Sorting in Saturn's C Ring and Cassini Division from Cassini UVIS, VIMS, and RSS Observations*. Lunar Planet. Sci. L, 2707 (abstract), March 2019.
- Jerousek, R.G., Colwell, J.E., Hedman, M.M., French, R.G., Marouf, E.A., Esposito, L.W., Nicholson, P.D. *Properties of aggregates and particle sizes in the C ring plateaus*. Cassini Science Symposium. Boulder, Co. August 2018.
- Jerousek, R.G. *C Ring Plateaus from UVIS, VIMS, and RSS Occultations*. Paper presented at the Biannual

Cassini UVIS meeting, University of Central Florida. Orlando, FL. January 2018.

- Jerousek, R. G., Colwell, J. E., Hedman, M. M., French, R. G., Marouf, E. A., Esposito, L. W., Nicholson, P. D. *The Particle Size Distribution in Saturn's Main Rings from Cassini VIMS and UVIS Stellar Occultations and Cassini RSS X, S, and Ka Band Radio Occultations*. American Geophysical Union, Fall Meeting 2017, abstract #P23B-2718, New Orleans, LA. December 2017.
- Jerousek, R. G. *Particle Size Distribution Parameters in Saturn's Rings from VIMS, UVIS, and RSS Occultations*. Paper presented at the Biannual Cassini UVIS meeting, Laboratory of Atmospheric and Space Physics (LASP), Boulder, CO. June 2017.
- Jerousek, R. G. *Sub-cm Particles in Saturn's Rings from VIMS, UVIS, and RSS Occultations*. Paper presented at the *Biannual Cassini UVIS meeting*, Caltech. Pasadena, CA. January 2017.
- Jerousek, R. G.; Colwell, J. E., Hedman, M. M., Marouf, E. A., Esposito, L. W., Nicholson, P. D., French, R. G. *Sub-cm Particles in Saturn's Rings from VIMS, UVIS, and RSS Occultations*. Paper presented at the American Astronomical Society, Division of Planetary Science (DPS) meeting #48, id.107.08 Pasadena, CA. November 2016.
- Jerousek, R. G. *Sub-cm particles and self-gravity wakes from VIMS and UVIS Occultations*. Paper presented at the Biannual Cassini UVIS meeting, Centre Spatial de Liege, Liege, Belgium. June 2016.
- Jerousek, R. G., Colwell, J. E., Nicholson, P. D., Hedman, M. M., Esposito, L. W., Harbison, R. A. (2014) *Particle Size Distribution in Saturn's C Ring and Cassini Division from VIMS and UVIS Stellar Occultations*. American Geophysical Union, Fall Meeting 2014, abstract #P11B-3756.
- Colwell, J. E., Sega, D.N., Jerousek, R.G., Esposito, L. W., Cooney, J. H. *Evidence for Break-Up of Clumps in Dynamically Stirred Regions of Saturn's Rings*. Paper presented at the American Geophysical Union, Fall Meeting 2017, abstract #P34A-03
- Colwell, J. E., Jerousek, R. G., Becker, T. M., Eckert, S., Cooney, J. H., Esposito, L. W. (2016) *Particle Size Variations in Saturn's Rings*. American Geophysical Union, Fall Meeting 2016, abstract id. #P33E-02
- Colwell, J. E., Jerousek, R. G., Nicholson, P. D., Hedman, M. M., Esposito, L. W., Harbison, R., West, R. A. (2013) *Small Particle Population in Saturn's A Ring from Self-Gravity Wake Observations*. Paper presented at the American Astronomical Society, Division of Planetary Science (DPS) meeting #45, id.210.06
- Colwell, J. E., Jerousek, R. G.; Esposito, L. W. (2010) *Sharp Edges in Saturn's Rings: Radial Structure and Longitudinal Variability*. Paper presented at the American Astronomical Society, Division of Planetary Science (DPS) meeting #42, id.50.01; Bulletin of the American Astronomical Society, Vol. 42, p.1007
- Colwell, J.E., Esposito, L. W.; Pettis, D., Sremčević, M., Jerousek, R. G., Bradley, E. T. (2009) *Cassini UVIS Ring Occultations: Standard PDS Data Products and Examples of Small-Scale Structures*. Paper presented at the American Astronomical Society, Division of Planetary Science (DPS) meeting #41 id.18.09
- Colwell, J. E., Esposito, L. W., Cooney, J. H., Jerousek, R. G., Lissauer, J. J., Stewart, G. R., Sremcevic, M. (2008) *Mass and Thickness of the Cassini Division in Saturn's Rings*. Paper presented at the American Geophysical Union, Spring Meeting 2008, abstract #P31A-03
- Colwell, J. E., Esposito, L. W., Sremcevic, M., Jerousek, R. G., Cooney, J. H., Lissauer, J. (2008) *Mass Density and Ring Thickness from Cassini UVIS Stellar Occultations*. Paper presented at the American Geophysical Union Fall Meeting 2008. abstract #P32A-01
- Colwell, J.E.; Jerousek, R.G., Lissauer, Jack; Esposito, L.W. (2008) *Vertical Structure of Saturn's Rings from*

Cassini UVIS Stellar Occultations. Paper presented at the 37th COSPAR Scientific Assembly. 13-20 July 13-20, 2008. Montréal, Canada., p.573

Colwell, J.E., Jerousek, R.G., Esposito, L.W. (2007) *The Structure of Sharp Edges in Saturn's Rings*. American Astronomical Society's Paper presented at the Division of Planetary Science (DPS) meeting #39. Bulletin of the American Astronom. Soc.

Professional Development Courses.

<i>Online Teaching Certification (IDL 6543)</i>	2020
<i>Developing Effective Surveys (SOTL2272)</i>	2020
<i>Understanding Professional Commitment (PRFC2264)</i>	2019
<i>Action Research Design and Data Collection (SOTL2274)</i>	2019
<i>Scholarship of Teaching & Learning (SOTL2171)</i>	2019
<i>Write to Learn (LCTS2226)</i>	2019
<i>Student Lifemap (LFMP2141)</i>	2019
<i>Assessment as a Tool for Learning ASSMT(221:1)</i>	2019
<i>Asking the Right Questions (LCTS2223)</i>	2018
<i>Inclusion and Diversity (IND215)</i>	2018
<i>Case-based Teaching (LCTS2222)</i>	2018
<i>Cooperative Learning in the College Classroom (LCTS2111)</i>	2018