

Richard G. Jerousek, Ph.D.

Planetary Astrophysicist.
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Education

Ph.D. Physics – <i>Determining the Small-Scale Structure and Particle Properties in Saturn’s Rings with Stellar and Radio Occultations</i>	University of Central Florida	2018
Master’s Physics	University of Central Florida	2008
Bachelor’s Physics/Mathematics minor	University of Central Florida	2006

Work Experience

University of Central Florida	Associate Lecturer	2024 –
University of Central Florida	Lecturer	2020 – 2024
Valencia College	Tenure-track Instructor	2018 – 2020
Valencia College	Continuing contract/adjunct professor/lab instructor	2008 – 2018
University of Central Florida	Research Scientist – Cassini UVIS	2009 – 2014

Research Grants

Tesseral field and differential rotation of Saturn using its ring structures. NASA Cassini Data Analysis Program	Co-I: \$155k	2025 – 2026
A cross-dataset analysis of particle size and structure in Saturn’s narrow ringlets. NASA Cassini Data Analysis Program	PI: \$520k	2024 – 2027
Mesoscale Structures in Saturn’s Rings. NASA Cassini Data Analysis Program	Co-I: \$500k	2020 – 2023
Stellar Occultation by Saturn’s Rings in the UV Hubble Space Telescope. HST Cycle 25 GO program	Co-I: \$10k	2018 – 2020

Teaching Awards and Grants

Awards

College of Sciences Undergraduate Teaching Excellence Award	2026
College of Sciences TONI Award: High Impact or High-Quality Instruction	2025
College of Sciences Outstanding Instruction Award: Successful Course Design or Transformation	2024

Grants

Harnessing the power of GPT to transform online courses, foster scientific literacy, and deter cheating. Digital Curriculum Innovation Initiative	PI	2023 – 2024
PHY 2048 Course Redesign. Course Redesign Initiative (CRI Extension)	Co-I	2021 – 2022

Teaching

Modalities: Large and small classes (10 – 450 students) face-to-face, mixed mode, online

Courses Taught: Advanced Observational Astronomy *AST 5263*, Experimental Methods in Astronomy *AST 4700*, Galaxies and Cosmology *AST 3402*, Solar System Astronomy *AST 3110*, Numerical Computing in Python *PHZ 3150*, Physics I with Calculus *PHY 2048 + honors*, Physics II with Calculus *PHY 2049 + honors*, College Physics I *PHY 2053*, College Physics II *PHY 2054*, Introductory Astronomy *AST 2002*, Selected Topics in Physics *PHY 2932*, Directed Independent Research *PHY 4912*

Publications

Refereed Articles

Jerousek, Richard G., Joshua E. Colwell, Larry W. Esposito, Matthew S. Tiscareno, Mark C. Lewis, Leos Pohl, and Diego A. Benavides (2024). “The smallest structures in Saturn’s rings from UVIS stellar occultations”. In: *Icarus* 415, p. 116069. doi: <https://www.sciencedirect.com/science/article/pii/S0019103524001295>.

- Jerousek, Richard G, Joshua E Colwell, Matthew M Hedman, Richard G French, Essam A Marouf, Larry W Esposito, and Philip D Nicholson (2020). "Saturn's C ring and Cassini division: Particle sizes from Cassini UVIS, VIMS, and RSS occultations". In: *Icarus* 344, p. 113565.
- Jerousek, Richard G, Joshua E Colwell, Larry W Esposito, Philip D Nicholson, and Matthew M Hedman (2016). "Small particles and self-gravity wakes in Saturn's rings from UVIS and VIMS stellar occultations". In: *Icarus* 279, pp. 36–50.
- Jerousek, Richard G, Joshua E Colwell, and Larry W Esposito (2011). "Morphology and variability of the Titan ringlet and Huygens ringlet edges". In: *Icarus* 216.1, pp. 280–291.
- Afigbo, Victor M., Matthew M. Hedman, Phillip Nicholson, Richard G. French, Christopher Mankovich, Richard G. Jerousek, and Janosz Dewberry. "Unveiling What Makes Saturn Ring: Quantifying the Amplitudes of Saturn's Planetary Normal-Mode Oscillations and Trends in C-Ring Properties Using Kronoseismology (VII)." *Journal of Geophysical Research: Planets* (2025). doi:10.1029/2024JE008710
- French, R.G., Nicholson, P.D., Hedman, M.M., Salo, H., Marouf, E.A., McGhee-French, C.A., Rappaport, N., Colwell, J., Jerousek, R., Afigbo, V.M. and Flury, S., 2025. Further reverberations of the 1983 impact with Saturn's C ring. *Icarus*, p.116463.
- Esposito, L. W., J. E. Colwell, S. Eckert, M. R. Green, R. G. Jerousek, and S. Madhusudhanan (2025). "Statistics of Saturn's ring occultations: Implications for structure, dynamics, and origins". In: *Icarus* 429, p. 116386. doi: <https://doi.org/10.1016/j.icarus.2024.116386>.
- Green, M.R., J.E. Colwell, L.W. Esposito, and R.G. Jerousek (2024). "Particle sizes in Saturn's rings from UVIS stellar occultations 2. Outlier Populations in the C ring and Cassini Division". In: *Icarus*, p.116081. issn: 0019–1035. doi: <https://www.sciencedirect.com/science/article/pii/S0019103524001416>.
- Sega, Daniel D., Glen Stewart, Joshua E. Colwell, Girish M. Duvvuri, Richard Jerousek, and Larry Esposito (2024). "The dynamics of self-gravity wakes in the Mimas 5:3 bending wave: Modifying the linear theory". In: *Icarus*, p. 115987. issn: 0019–1035. doi: <https://www.sciencedirect.com/science/article/pii/S0019103524000459>.
- Jarmak, SG, TM Becker, JE Colwell, RG Jerousek, and LW Esposito (2022). "Solar occultation observations of Saturn's rings with Cassini UVIS". In: *Icarus* 388, p. 115237.
- Brooks, Shawn, Tracy M Becker, Kevin Baillie, Heidi Becker, E Todd Bradley, Joshua E Colwell, Jeffrey N Cuzzi, Imke de Pater, Stephanie Eckert, Maryame El Moutamid, et al. (2021). "Frontiers in Planetary Rings Science". In: *Bulletin of the American Astronomical Society* 53.4, p. 258.
- Tiscareno, Matthew S, Philip D Nicholson, Jeffrey N Cuzzi, Linda J Spilker, Carl D Murray, Matthew M Hedman, Joshua E Colwell, Joseph A Burns, Shawn M Brooks, Roger N Clark, et al. (2019). "Close-range remote sensing of Saturn's rings during Cassini's ring-grazing orbits and Grand Finale". In: *Science* 364.6445, eaau1017.
- Esposito, Larry W, Nicole Albers, Bonnie K Meinke, Miodrag Sremcevic, Prasanna Madhusudhanan, Joshua E Colwell, and Richard G Jerousek (2012). "A predator-prey model for moon-triggered clumping in Saturn's rings". In: *Icarus* 217.1, pp. 103–114.
- Colwell, JE, LW Esposito, RG Jerousek, M Sremcevic, D Pettis, and ET Bradley (2010). "Cassini UVIS stellar occultation observations of Saturn's rings". In: *The Astronomical Journal* 140.6, p. 1569.

Proceedings

- Eckert, S., Colwell, J. E., Jerousek, R., Becker, T. M., & Esposito, L. W. (2025). Stellar Occultation Diffraction as a Probe of Edge Structure in Saturn's Narrow, Eccentric Ringlets. AGU25.
- Colwell, J., Faulkner, E., Goforth, A., Jerousek, R., & Esposito, L. (2025). Opaque Expanses in Saturn's B ring. EPSC-DPS Joint Meeting 2025, 2025, EPSC-DPS2025-1101. doi:10.5194/epsc-dps2025-1101
- Jerousek, R. G., Becker, T. M., Colwell, J. E., Eckert, S. Esposito, L. E., French, R. G., Hedman, Jarmak, S. G., M. M. Nicholson, P. D., Peterson, C. (2025) Comparison of Orbital Phase-Resolved Structure and Particle Sizes in Saturnian and Uranian Ringlets. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 55. AAS/Division for Planetary Sciences Meeting Abstracts, 112.06, p. 112.06.
- Jerousek, R. G., Peterson, C., Becker, T. M., Colwell, J. E., Esposito, L. W., Jarmak, S. G. (2024) Saturn's Narrow and Eccentric Ringlets: Composition and Structure. In: *AGU24*.

- Jerousek, R. G., S. S. Eikenberry, J. E. Colwell, L. W. Esposito, P. D. Nicholson, M. R. Green, A. S. D. Foster, M. M. Hedman, T. M. Becker, G. M. Holsclaw, M. El Moutamid, M. S. Tiscareno, S. Eckert, S. G. Jarmak, and D. D. Segal (July 2023). "High-Speed Stellar Occultations: Not Just Rings!" In: LPI Contributions. Vol. 2808. LPI Contributions, 8146, p. 8146.
- Afigbo, V., Hedman, M. M., Nicholson, P. D., French, R. G., Mankovich, C., Jerousek, R., & Dewberry, J. (2024). Echoes from the Depths: Investigating Saturn's Interior Using Ring-Seismology. *AGU24*.
- Afigbo, V., Hedman, M. M., Nicholson, P. D., French, R. G., Mankovich, C., Jerousek, R., & Dewberry, J. (2024). Weighing Snowballs: Resonant Responses to Satellite and Planetary Perturbations Reveal Secrets of Saturn's C-Ring. *AGU24*.
- Green, M., Colwell, J. E., Esposito, L. W., & Jerousek, R. (2024). A Comparative Analysis of Cassini UVIS Data Using 3D Monte Carlo Simulations: Exploring Saturn's A Ring. *AGU24*.
- Colwell, J. E., Goforth, A., Coleman, C., Jerousek, R., & Esposito, L. W. (2024). Saturn's B Ring Phantoms: Frequency, Properties, and Distribution. *AGU24*.
- Ajello, J. M., G. M. Holsclaw, W. E. McClintock, L. W. Esposito, M. Chafin, A. R. Hendrix, W. Pryor, R. Jerousek, and J. Colwell (July 2023). "UV Spectroscopy of the Uranus Upper Atmosphere". In: LPI Contributions. Vol. 2808. LPI Contributions, 8037, p. 8037.
- Becker, T. M., R. S. Giles, T. K. Greathouse, K. D. Retherford, S. A. Stern, J. A. Kammer, P. M. Molyneux, U. Raut, S. Jarmak, K. E. Miller, R. J. Cartwright, C. B. Beddingfield, J. E. Colwell, R. G. Jerousek, V. Hue, T. A. Nordheim, A. Lusay-Kuti, L. Roth, S. M. Brooks, A. R. Hendrix, E. M. Royer, and S. Eckert (July 2023). "The Ultraviolet as a Probe for Processes in the Uranian System". In: LPI Contributions. Vol. 2808. LPI Contributions, 8091, p. 8091.
- Eckert, S., R. G. Jerousek, J. E. Colwell, M. R. Green, L. W. Esposito, and T. M. Becker (July 2023). "Statistical Analysis of High-Resolution Uranian Stellar Occultations". In: LPI Contributions. Vol. 2808. LPI Contributions, 8141, p. 8141.
- Eckert, Stephanie, Hannah Lander, Larry Esposito, Joshua Colwell, and Richard Jerousek (Oct. 2023). "Phase dependence of Cassini UVIS stellar occultation statistics in Saturn's A Ring density waves". In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 55. AAS/Division for Planetary Sciences Meeting Abstracts, 112.06, p. 112.06.
- Esposito, Larry, Joshua Colwell, Stephanie Eckert, Melody Green, Richard Jerousek, Sreenivas Madhusudhanan, and Vijay Luthra (Oct. 2023). "Statistics of Saturn's Ring Occultations: Implications for Structure, Dynamics and Origins". In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 55. AAS/Division for Planetary Sciences Meeting Abstracts, 112.05, p. 112.05.
- Holsclaw, G. M., W. E. McClintock, L. W. Esposito, J. Ajello, M. Chaffin, D. Bhattacharyya, A. R. Hendrix, W. Pryor, R. Jerousek, and J. Colwell (July 2023). "Critical Science Enabled by Ultraviolet Instrumentation on the Uranus Orbiter". In: LPI Contributions. Vol. 2808. LPI Contributions, 8183, p. 8183.
- Jerousek, Richard, Larry Esposito, and Stephanie Eckert (Oct. 2023). "A trimodal optical depth model for mesoscale structure in Saturn's rings: wakes and ghosts fit data better than wakes alone". In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 55. AAS/Division for Planetary Sciences Meeting Abstracts, 110.08, p. 110.08.
- Lander, Hannah, Stephanie Eckert, Larry Esposito, Joshua Colwell, and Richard Jerousek (Oct. 2023). "Structural changes within Saturn's A ring density waves revealed by Cassini UVIS stellar occultation statistics". In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 55. AAS/Division for Planetary Sciences Meeting Abstracts, 110.07, p. 110.07.
- Esposito, Larry W., Miodrag Sremcevic, Joshua Colwell, Stephanie Eckert, and Richard Jerousek (2022). "Shape and compression of self-gravity wakes in Saturn's rings". In: EGU General Assembly Conference Abstracts, EGU22-6601.
- Hsu, Sean, Robert Andrew Marshall, Richard Jerousek, and Nicolas Lee (2022). "Planetary Rings, Meteoroid and Dust Populations, and Effects I Oral". In: Fall Meeting 2022. AGU.
- Jerousek, Richard, Joshua Colwell, and Larry Esposito (2022). "A Close Look at the C Ring Plateaus from Cassini Stellar and Radio Occultations". In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 54. 8, pp. 301-03.

- Jerousek, Richard, Joshua E Colwell, and Larry W Esposito (2022). “The 3rd Dimension of the C ring Plateaus from Cassini Stellar and Radio Occultations”. In: AGU Fall Meeting Abstracts. Vol. 2022, P35E–1920.
- Colwell, Joshua, Madisyn Brooks, Richard Jerousek, Casey Coleman, Kirsten Lina, Austin Rothermich, and Larry Esposito (2021). Phantoms in the Dark: Mesoscale Openings in the Core of Saturn’s B Ring. Tech. rep. Copernicus Meetings.
- Colwell, Joshua, Madisyn Brooks, Richard Jerousek, Casey Coleman, Matthew Tiscareno, Klaus–Michael Aye, Mark Lewis, and Larry Esposito (2021). “Irregular Structure in the Core of Saturn’s B Ring”. In: AGU Fall Meeting Abstracts. Vol. 2021, P34A–01.
- Colwell, Joshua, Casey Coleman, Kirsten Lina, Richard Jerousek, Matthew Tiscareno, Klaus–Michael Aye, and Larry Esposito (2021). “Small–Scale Structure in the Core of Saturn’s B Ring”. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 53. 7, pp. 407–04.
- Eckert, Stephanie, Joshua E Colwell, Richard G Jerousek, Larry W Esposito, and Ronit Luthra (2021). “Characterizing self–gravity wake morphology in Saturn’s rings from Cassini UVIS stellar occultation statistics”. In: European Planetary Science Congress, EPSC2021–860.
- Eckert, Stephanie N, Joshua Colwell, Larry Esposito, and Richard Jerousek (2021). “Self–Gravity Wake Properties in Saturn’s A Ring Density Waves from Cassini UVIS stellar occultation data”. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 53. 7, pp. 407–06.
- Esposito, Larry W, Miodrag Sremcevic, Joshua Colwell, Stephanie Eckert, and Richard Jerousek (2021). “Flattening of ring particles and self–gravity wakes in Saturn’s rings”. In: EGU General Assembly Conference Abstracts, EGU21–3519.
- Green, Melody R, Joshua E Colwell, Richard Jerousek, and Mark Lewis (2021). “Characterization of Particle Sizes and Local Gaps in Saturn’s C Ring from Stellar Occultation Data”. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 53. 7, pp. 407–05.
- Jerousek, Richard, Joshua Colwell, Matthew Tiscareno, Mark Lewis, and Klaus–Michael Aye (Dec. 2021). “Small–scale azimuthal structure in Saturn’s rings”. In: AGU Fall Meeting Abstracts. Vol. 2021, P35E– 2168, P35E–2168.
- Jerousek, Richard and Larry W Esposito (2021a). “P35E: Planetary Rings, Meteoroid and Dust Impacts, and Effects Online Poster Summary”. In: AGU Fall Meeting 2021. AGU. – (2021b). “Planetary Rings, Meteoroid and Dust Populations, and Effects II Poster Summary”. In: AGU Fall Meeting 2021. AGU.
- Lee, Nicolas, Sean Hsu, Richard Jerousek, Benjamin Estacio, and Larry W Esposito (2021). “Planetary Rings, Meteoroid and Dust Populations, and Effects I Oral”. In: AGU Fall Meeting 2021. AGU.
- Luthra, Vijay, Stephanie Eckert, Joshua Colwell, and Richard Jerousek (2021). “Atlas of Statistical Moments of UVIS Stellar Occultation Data of Saturn’s Rings”. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 53. 7, pp. 407–08.
- Mauricio–Gonzalez, Adrian, Joshua Colwell, and Richard Jerousek (2021). “Azimuthal Variability at Edges in Saturn’s Rings from Binary Star Occultations”. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 53. 7, pp. 407–09.
- Brooks, Madisyn, Joshua E Colwell, and Richard Jerousek (2020). “Phantoms in the Dark: Azimuthally and Radially Limited Regions of Translucence in Opaque Regions of Saturn’s B Ring”. In: AGU Fall Meeting Abstracts. Vol. 2020, P015–0010.
- Eckert, S, J Colwell, L Esposito, and R Jerousek (2020). “Sizes of Particles, Clumps, and Holes in Density Waves in the Cassini Division in Saturn’s Rings from Cassini UVIS Stellar Occultation Statistics”. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 52. 6, pp. 513–02.
- Esposito, L, Miodrag Sremcevic, J Colwell, Stephanie Eckert, and R Jerousek (2020a). “Statistics of Saturn Ring Occultations”. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 52.
- Jerousek, R., J. Colwell, M. Lewis, L. Benyamine, C. Singleton, K. Aye, and M. Tiscareno (Oct. 2020). “Mesoscale structures in Saturn’s rings from UVIS autocorrelations”. In: AAS/Division for Planetary Sciences Meeting Abstracts. Vol. 52. AAS/Division for Planetary Sciences Meeting Abstracts, 513.04, p. 513.04.

- Jerousek, Richard, Lamia Benyamine, Mark Lewis, Joshua E Colwell, Matthew S Tiscareno, and Klaus–Michael Aye (2020). “Temporally and azimuthally averaged mesoscale structures in Saturn’s rings from Cassini UVIS occultations”. In: AGU Fall Meeting Abstracts. Vol. 2020, P015–0012.
- Jerousek, Richard G, Joshua E Colwell, Matthew M Hedman, Richard G French, Essam A Marouf, Larry W Esposito, and Philip D Nicholson (2020). “Saturn’s C ring and Cassini division: Particle sizes from Cassini UVIS, VIMS, and RSS occultations”. In: *Icarus* 344, p. 113565.
- Jerousek, RG, JE Colwell, MM Hedman, RG French, EA Marouf, LW Esposito, and PD Nicholson (2019). “Particle Sizes and Sorting in Saturn’s C Ring and Cassini Division from Cassini UVIS, VIMS, and RSS Observations”. In: 50th Annual Lunar and Planetary Science Conference. 2132, p. 2707.
- Jerousek, Richard, Joshua E Colwell, Matthew M Hedman, Richard G French, Essam A Marouf, Larry W Esposito, and Philip D Nicholson (2019). “Particle sizes in Saturn’s rings from Cassini UVIS, VIMS, and RSS Occultations. (invited)”. In: AGU Fall Meeting Abstracts. Vol. 2019, P21B–02. “Mesoscale Structures in Saturn’s Rings from Cassini UVIS Stellar Occultation Data” (2019). In: AGU Fall Meeting Abstracts. Vol. 2019, P23C–3505.
- Aye, Klaus–Michael, Larry W Esposito, Joshua E Colwell, Richard Gregory Jerousek, and Glen R Stewart (2018). “Texture of Saturn’s C Ring Plateaus as seen by Cassini ISS”. In: AGU Fall Meeting Abstracts. Vol. 2018, P43B–07.
- Colwell, Joshua E, Daniel N Sega, Richard Gregory Jerousek, James H Cooney, and Larry W Esposito (2017). “Evidence for Break–Up of Clumps in Dynamically Stirred Regions of Saturn’s Rings”. In: AGU Fall Meeting Abstracts. Vol. 2017, P34A–03.
- Jerousek, Richard Gregory, Josh Colwell, Matthew M Hedman, Richard G French, Essam A Marouf, Larry Esposito, and Philip D Nicholson (2017). “The Particle Size Distribution in Saturn’s C Ring from UVIS and VIMS Stellar Occultations and RSS Radio Occultations”. In: AAS/Division for Planetary Sciences Meeting Abstracts# 49. Vol. 49, pp. 104–09.
- Jerousek, Richard Gregory, Joshua E Colwell, Matthew M Hedman, Essam A Marouf, Richard G French, Larry W Esposito, and Philip D Nicholson (2017). “The particle size distribution in Saturn’s Main Rings from VIMS and UVIS stellar occultations and RSS radio occultations.” In: AGU Fall Meeting Abstracts. Vol. 2017, P23B–2718.
- Colwell, Joshua E, Richard Gregory Jerousek, Tracy M Becker, Stephanie Eckert, James H Cooney, and Larry W Esposito (2016). “Particle Size Variations in Saturn’s Rings”. In: AGU Fall Meeting Abstracts, P33E–02.
- Jerousek, Richard G, Joshua E Colwell, Larry W Esposito, Philip D Nicholson, and Matthew M Hedman (2016). “Small particles and self–gravity wakes in Saturn’s rings from UVIS and VIMS stellar occultations”. In: *Icarus* 279, pp. 36–50.
- Jerousek, Richard Gregory, Josh E Colwell, Matthew M Hedman, Essam A Marouf, Larry W Esposito, Philip D Nicholson, and Richard G French (2016). “Sub–cm Particles in Saturn’s Rings from VIMS, UVIS, and RSS occultations”. In: AAS/Division for Planetary Sciences Meeting Abstracts# 48. Vol. 48, pp. 107–08.
- Jerousek, Richard Gregory, Joshua E Colwell, Larry W Esposito, and Philip D Nicholson (2015). “Particle Sizes and Self Gravity Wakes in Saturn’s A Ring (invited)”. In: AGU Fall Meeting Abstracts. Vol. 2015, P43E–04.
- Colwell, Joshua E, Richard Gregory Jerousek, and Larry W Esposito (2014). “Clumping in the Cassini Division and C Ring: Constraints from Stellar Occultations”. In: AGU Fall Meeting Abstracts. Vol. 2014, P11B–3761.
- Jerousek, Richard Gregory, Joshua E Colwell, Philip D Nicholson, Matthew M Hedman, Larry W Esposito, and Rebecca A Harbison (2014). “Particle Size Distribution in Saturn’s C Ring and Cassini Division from VIMS and UVIS Stellar Occultations”. In: AGU Fall Meeting Abstracts. Vol. 2014, P11B–3756.
- Colwell, Joshua E, RG Jerousek, PD Nicholson, MM Hedman, LW Esposito, R Harbison, and RA West (2013). “Small Particle Population in Saturn’s A Ring from Self–Gravity Wake Observations”. In: AAS/Division for Planetary Sciences Meeting Abstracts# 45. Vol. 45, pp. 210–06.
- Colwell, Joshua E, RG Jerousek, and LW Esposito (2010). “Sharp Edges in Saturn’s Rings: Radial Structure and Longitudinal Variability”. In: AAS/Division for Planetary Sciences Meeting Abstracts# 42. Vol. 42, pp. 50–01.
- Colwell, Joshua E, LW Esposito, D Pettis, M Sremcevic, RG Jerousek, and ET Bradley (2009). “Cassini UVIS Ring Occultations: Standard PDS Data Products and Examples of Small–Scale Structures”. In: AAS/Division for Planetary Sciences Meeting Abstracts# 41. Vol. 41, pp. 18–09.

- Colwell, JE, LW Esposito, JH Cooney, RG Jerousek, JJ Lissauer, GR Stewart, and M Sremcevic (2008). "Mass and Thickness of the Cassini Division in Saturn's Rings". In: AGU Spring Meeting Abstracts. Vol. 2008, P31A-03.
- Colwell, JE, LW Esposito, JJ Lissauer, RG Jerousek, and M Sremcevic (2008). "Three dimensional Structure of Saturn's Rings from Cassini UVIS Stellar Occultations". In: European Planetary Science Congress 2008, p. 759.
- Colwell, Joshua E, RG Jerousek, and LW Esposito (2008). "The Structure of Sharp Edges in Saturn's Rings". In: AAS/Division for Planetary Sciences Meeting Abstracts# 40. Vol. 40, pp. 29 06

Professional Development

Professional Development Presentations

- Principles of Assessment and Four Important Practices | Co-ed with Roslyn Miller, Ph.D. March, 2025
Faculty Seminars in Online Teaching – University of Central Florida

Scholarship in Teaching and Learning

- Faculty Seminars on Online Teaching 2025
Digital Learning Day 2023
Interactive Distributed Learning for Technology-Mediated Course Delivery *IDL 6543* 2020
Developing Effective Surveys *SOTL2272* 2020
Understanding Professional Commitment *PRFC2264* 2019
Action Research Design and Data Collection *SOTL2274* 2019
Scholarship of Teaching & Learning *SOTL2171* 2019
Write to Learn *LCTS2226* 2019
Student Lifemap *LFMP2141* 2019
Assessment as a Tool for Learning *ASSMT2211* 2019
Asking the Right Questions *LCTS2223* 2018
Inclusion and Diversity *IND215* 2018
Case-based Teaching *LCTS2222* 2018
Cooperative Learning in the College Classroom *LCTS2111* 2018

Service

Service to Profession

- Session Convener and Session Chair: Planetary Ring, Meteoroid, and Dust Populations and Effects American Geophysical Union (AGU) Fall Meetings 2021– 2025
Referee: *Icarus*, *Astronomy & Astrophysics*, *Philosophical Transactions A*, *Journal of Geophysical Research* 2020 – 2025

Service to Department and College

- College of Science – Undergraduate Curriculum and Standards 2025 –
PHY 2048/2049 Physics I & II with Calculus Coordinator 2022 –
Robinson Observatory Committee (Chair) 2022 –
AST 2002 Alignment Committee 2024 –
Website and Social Media Committee (Chair) 2020 – 2025