

# Richard G. Jerousek Ph.D.

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Computational Astrophysicist.

Lecturer and Observatory Director

Physics Department. University of Central Florida.

## EDUCATION

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PhD	(Physics)	University of Central Florida	2018
Master's	(Physics)	University of Central Florida	2008
Bachelor's	(Physics, minor: Mathematics)	University of Central Florida	2006

## WORK EXPERIENCE

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<b>University of Central Florida</b>	Lecturer	2020 - present
<b>Valencia College</b>	Tenure-earning Professor	2014 - 2020
<b>Valencia College</b>	Adjunct Professor/Lab Instructor	2008 - 2014

## RESEARCH

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<b>Cassini Ultraviolet Imaging Spectrograph Science Team</b>	2008 - 2018
Co-I: Mesoscale structures in Saturn's rings, Cassini Data Analysis Program (CDAP)	2020 - 2023
Co-I: Stellar Occultation by Saturn's Rings in the UV, Hubble Space Telescope Cyc 25 GO Program	2018 - 2020

## TEACHING AND SERVICE

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<b>Modalities:</b>	Large & small classes (10 - 350 students) face-to-face, mixed mode, and online.
<b>Courses Taught:</b>	Numerical Methods in Python (PHZ 3150), Solar System Astronomy (AST 3110), Physics I with Calc. (PHY 2048 + honors), Physics II with Calc. (PHY 2049 + honors), Intro. to Astronomy (AST 2002 + honors), Physics I with Alg./Trig. (PHY 2053), Physics II with Alg./Trig. (PHY 2054), Selected Topics in Physics (PHY 2936), Directed Independent Research (PHY 4912)
<b>Prof. Service:</b>	<ul style="list-style-type: none"><li>· Conveener/Chair of Planetary Rings, Meteoroid and Dust Populations, and Effects session. AGU Fall meetings. (2020 - present)</li><li>· Chair of Website and Social Media Committee, UCF Physics Dept. (2020 - present)</li><li>· Chair of Observatory Committee, UCF Physics Dept. (2022 - present)</li></ul>

## PUBLICATIONS AND CONFERENCES

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### Journal Articles

- 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.
- 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.

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.

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.

Esposito, Larry W, Nicole Albers, Bonnie K Meinke, Miodrag Sremčević, 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.

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.

Colwell, JE, LW Esposito, RG Jerousek, M Sremčević, D Pettis, and ET Bradley (2010). “Cassini UVIS stellar occultation observations of Saturn’s rings”. In: *The Astronomical Journal* 140.6, p. 1569.

## Conferences

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.

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, 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.

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.

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.

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.