

CONTACT
INFORMATION

The Johns Hopkins University Applied Physics Laboratory
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EDUCATION

Ph.D. in Space and Planetary Sciences 2012
Arkansas Center for Space and Planetary Sciences, University of Arkansas
• Dissertation: Modeling H₂O stability and transport on Mars and Iapetus: Exploring their effects on geomorphic and atmospheric processes

Bachelor's degrees in Physics & Mathematics 2008
Department of Physics and Astronomy & Department of Mathematics, Alfred University
• *Magna cum Laude*, with Honors in Physics and Astronomy
• Minor in Planetary Science
• Thesis: An analysis of Ganymede and Callisto using impact cratering distribution

ADDITIONAL
EDUCATION

NASA/JPL/Caltech Planetary Science Summer School 2011
• Developed a Venus Lander Concept Mission with JPL's Team X

ACADEMIC
APPOINTMENTS

Planetary Radar Scientist Sep 2022 - *present*
Space Exploration Sector, Johns Hopkins University Applied Physics Laboratory
• Duties: Planetary Defense Lead for OSIRIS-APEX, Science Investigation Team Member for NEO Surveyor, LRO Mini-RF Team Member

Planetary Scientist Nov 2017 - Aug 2022
Lunar and Planetary Institute (LPI), Universities Space Research Association (USRA)
• Duties: LPI Summer Internship Program Co-Coordinator, Astrobiology & Geology Science Group Manager, *promoted to Senior Scientist on Jan 2022*

Planetary Radar Astronomer Aug 2014 - Mar 2018
Arecibo Observatory, Universities Space Research Association (USRA)
• Duties: Project Manager for the Arecibo Observatory Space Academy, University Relations Coordinator, Webmaster for the Arecibo Proposal Submission System

Postdoctoral Research Associate Aug 2012 - July 2014
Department of Earth, Environmental, and Planetary Sciences, Brown University
• Focus: Modeling impact-induced thermal history and compositions of planetary bodies

Senior Graduate Assistant Aug 2008 - May 2012
Arkansas Center for Space and Planetary Sciences, University of Arkansas
• Focus: Heat and mass transfer modeling focusing on stability and transport of water on Mars and Iapetus and its effect on the local environment

LPI-JSC Summer Intern May 2007 - Aug 2007
Lunar and Planetary Institute, USRA
• Focus: Cratering history of Ganymede and Callisto

PROFESSIONAL
EXPERIENCE

Science Editor Jan 2020 - *present*
Planetary Science Journal, American Astronomical Society

Computer Support Assistant and Web Developer May 2011 - July 2012
National Office for Research on Measurement and Evaluation Systems, Univ. of Arkansas

AWARDED
GRANTS

Total Awarded Funds from PI Grants to Date = \$1,554,137

PI, “The Planetary Radar Investigation, Demonstration, and Exploration (PRIDE) Laboratory”, NASA Early Career Fellowship Program, 09/2019 - 05/2024 at \$100,000, 0.17 FTEs.

Institutional PI, “Arecibo Observatory Planetary Radar Program”, NASA SSO; PI: F. Venditti (UCF), 03/2019 - 03/2024, 0.5 FTE.

Co-I, “Research Activities Supporting Science and Lunar Exploration (RASSLE)”, NASA SSERVI; PI: D. Hurley (APL), 09/2023 - 08/2028, 0.28 FTE.

Co-I, “Martian dynamic habitability from the recent past to the present day”, NASA HW; PI: A. Soto (SwRI), 08/2023 - 08/2026, 0.20 FTE.

Co-I, “Understanding the Heterogeneity of Mercury’s Volatile-Bearing South Polar Deposits”, NASA DDAP; PI: H. Meyer (APL), 07/2023 - 07/2026, 0.20 FTE.

Co-I, “Planetary Resources and Content Heroes (ReaCH)”, Science Activation Program Integration; PI: A. Shaner (USRA/LPI), 01/2021 - 12/2025, 0.08 FTE.

Co-I, “Age constraints for the Martian South Polar Layered Deposits from impact cratering”, NASA MDAP; PI: A. Stickle (JHU/APL), 08/2020 - 08/2024, 0.16 FTE.

PAST
GRANTS

PI, “The Planetary Radar Investigation, Demonstration, and Exploration Laboratory”, USRA Internal Research and Development program, 04/2018 at \$95,000.

PI, “The biologic potential of the martian subsurface via brine production through atmosphere-regolith interactions”, NASA HW, 08/2017 - 09/2022 at \$457,641.

PI, “Saturn’s recent crater flux as constrained by *Cassini* VIMS”, NASA CDAP, 02/2017 - 09/2022 at \$605,159.

PI, “Student and early career scientist support for attending the topical conference First Billion Years: Habitability”, TWSC Program, 07/2019 - 07/2020 at \$13,298.

PI, “Investigating the martian near-surface water exchange: Insights from comparisons at equatorial and polar latitudes”, NASA MDAP, 06/2015 - 06/2019 at \$283,039.

Co-I, “Experimental study of brine production in the Martian regolith”, NASA HW; PI: V. F. Chevrier (Univ. Arkansas), 01/2020 - 01/2023.

Co-I, “TREX: Toolbox for Research and Exploration”, NASA SSERVI; PI: A. Hendrix (PSI), 06/2017 - 06/2022.

Co-I, “Remote measurement of lunar heat flow from Earth-based radio astronomy”, NASA SSO; PI: M. Siegler (PSI), 05/2017 - 04/2021.

Co-I, “Radar speckle investigations of near-Earth asteroid spin states”, NASA SSO; PI: Michael Busch (SETI), 01/2017 - 01/2020.

HONORS &
AWARDS

Johns Hopkins University Applied Physics Laboratory

- Vega Award, Constellation Award Series 2023

International Astronomical Union

- Asteroid 2010 ER87 now named (389478) Rivera-Valentín 2019

NASA Planetary Science Division

- NASA Early Career Fellow named 2016 & awarded 2019

Universities Space Research Association

- 10-year Service Award 2019

University of Arkansas

- Doctoral Academy Fellow 2008 - 2012

Alfred University

- Alfred University Scholar 2008
- Dean’s Award 2008
- Diversity Leadership Award 2008
- Metzger Award in Astronomy 2007

**PROFESSIONAL
SERVICE**
Mission Experience

- *Planetary Defense Lead*, OSIRIS-APEX 2023 - present
- *Team Member*, Lunar Reconnaissance Orbiter Mini-RF 2022 - present
- *Investigation Team Member*, Near-Earth Object Surveyor Mission 2019 - present

Committees

- *Committee on Astrobiology and Planetary Sciences*, NASEM 2023 - present
- *Equity, Diversity, and Inclusion Working Group (EDI-WG)* 2019 - 2022
- *Professional Culture and Climate Subcommittee*, AAS/DPS 2017 - 2022
- *Small Bodies Panel*, Planetary Science and Astrobiology Decadal Survey 2020 - 2022
- *State of the Profession*, Planetary Science and Astrobiology Decadal Survey 2020 - 2022
- *Arecibo Observatory Users Committee* 2019 - 2020
- *AAS/DPS Professional Development Committee* 2015 - 2018

Conferences

- *Lead Organizer*, *Brines Across the Solar System*, Topical Conference Series 2021 - 2023
- *Co-Convener*, *Advancing IDEA in Planetary Science Conference* April 2022
- *Convener*, *Brines Across the Solar System: Modern Brines* Oct. 2021
- *Convener*, *First Billion Years: Habitability* Sept. 2019

Referee

- *Group Chief & Reviewer*, NASA ROSES Programs, including NESSF, NPP, & NSF
 - *Reviewer*, Nature Astronomy, Nature Geoscience, Scientific Reports, Meteoritics & Planetary Science, JGR-Planets, Icarus, Advances in Space Research, & Earth, Moon, and Planets
 - *Reviewer for National Academies' Reports*, *Evaluation of Bioburden Requirements for Mars Missions*, *Foundations of a Healthy and Vital Research Community*, *Planetary Protection Considerations for Missions to Solar System Small Bodies*
 - *Issue Editor*, Planetary Science Journal, Focus Issue "Brines Across the Solar System"
 - *Issue Editor*, Planetary Science Journal, Focus Issue "Arecibo's Planetary Science"
 - *Guest Editor*, Astrobiology, Special Collection "First Billion Years: Habitability"
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**INSTITUTIONAL
SERVICE****Lunar and Planetary Institute**

- Co-Chair, *LPI IDEA Advisory Committee* Sep 2021 - Aug 2022
- Member, *USRA Diversity and Inclusion Committee* Aug 2020 - Aug 2022
- Co-Coordinator, LPI-ARES Summer Intern Program Aug 2018 - Aug 2022

Arecibo Observatory

- *Webmaster*, Arecibo Proposal Submission System Aug 2015 - Mar 2018
- *Assistant Coordinator*, Arecibo REU program Jan 2015 - Aug 2017
- *Project Manager*, Arecibo Observatory Space Academy Aug 2015 - May 2017
- *Colloquium Organizer* Jan 2015 - May 2016

Brown University

- *Seminar Organizer* Jan 2013 - May 2014

University of Arkansas

- *Graduate Student Representative* Jan 2011 - Dec 2011
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**MEDIA
APPEARANCES****Lunar and Planetary Institute**

Nov 2017 - Aug 2022

- NASA Astrobiology, *Countdown to Mars*
- NPR, *Short Wave Podcast*
- The Planetary Society, *Planetary Radio*
- PBS NOVA, *The Planets*

Arecibo Observatory

Aug 2014 - Mar 2018

- *Major TV Appearances*: HBO's VICE, National Geographic, *One Strange Rock*
- Participated in 20th Century Fox promotion for "The Martian" in Puerto Rico
- Named "*Ciudadano Fantastico*" by 20th Century Fox as promotion for Fantastic Four

**ADVISING &
SUPERVISION**
Postdoctoral Fellows & Research Assistants

- Rachel Slank, Postdoctoral Fellow (Co-Advisor), LPI 2022 - *present*
- Betzaida Aponte Hernandez, Research Assistant, LPI 2018 - 2022
- Carolina Rodriguez Sanchez-Vahamonde, Research Assistant, LPI 2020 - 2021
- Sriram Bhiravarasu, Postdoctoral Fellow, LPI 2018 - 2019

Graduate Students

- Santa L. Pérez Cortés, Purdue University, Intern Summer 2024
- Cole Anthony Nypaver, University of Tennessee, ex officio 2019 - 2023
- Rachel Slank, University of Arkansas, ex officio 2018 - 2022
- Carlos Estevez Galarza, University of Puerto Rico, thesis advisor 2017 - 2019
- Holly Farris, University of Arkansas, ex officio 2013 - 2019
- Adrienn Luspay-Kuti, University of Arkansas, ex officio 2012 - 2014

Undergraduate Students*Lunar and Planetary Institute*

- Chansey Champagne, Intern Summer 2022
- Christian Cooper, Intern Summer 2019
- Gabriel Muñoz Negrón, PRIDE Lab Intern Summer 2019
- Emily Whittaker, Intern (Co-Advisor) Summer 2019
- Andy López Oquendo, Intern Summer 2018

Arecibo Observatory

- Clarissa Leight, REU Intern Summer 2016
- Carolina Rodriguez Sanchez-Vahamonde, REU Intern Summer 2016
- Bryan Rodriguez Colon, REU Intern & Research Intern Summer 2015 & 2016
- Carlos Estevez Galarza, Research Intern May 2015 - Nov 2015

Brown University

- Erika Lopez Garcia, Research Intern Jan 2013 - May 2014

University of Arkansas

- Ilya Uts, REU intern Summer 2011
 - Nitish Chopra, REU intern Summer 2010
 - Victor Akunyili, REU intern Summer 2009
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**INVITED
TALKS****Topic: Planetary Radar & Planetary Defense**

- Brown Bag Seminar, Purdue University Sep 2023
- SEES High School Intern Seminar Series, University of Texas Jul 2023
- [Cosmic Explorations Speaker Series](#), Lunar and Planetary Institute Sep 2022
- Brown Bag Seminar, Johns Hopkins Applied Physics Laboratory May 2022
- AO Virtual Seminar, Arecibo Observatory Mar 2022
- Geology Seminar, Department of Geology, Colby College Nov 2021
- [Cosmic Thursday Speaker](#), University of California Riverside Oct 2021
- Seminar Series, Department of Geosciences, Stony Brook University Sep 2021
- Invited Talk, Planetary Habitability Lab, University of Puerto Rico at Arecibo Dec 2018
- Sagan Day Speaker, Silliman College, Yale University Nov 2017
- Seminar Series, University of Puerto Rico at Rio Piedras Jan 2017
- [Google Hangout Seminar](#), University of Central Arkansas, Physics Department Apr 2015

Topic: Brines & Habitability

- [Seminar Series](#), Lunar and Planetary Laboratory, University of Arizona Nov 2021
- McWilliams Seminar Series, Tulane University Sep 2021
- Space Science Division Seminar Series, NASA Ames Research Center Sep 2021
- Astrobiology Seminar Series, Georgia Institute of Technology Apr 2021
- Space Science Series, University of Puerto Rico at Arecibo Apr 2021
- Committee on Planetary Protection, National Academies of Sciences May 2021
- Guest Lecturer, Introduction to Astrobiology, Williams College Nov 2020

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| Planetary Lunch Seminar Series, Massachusetts Institute of Technology | Sep 2020 |
| Seminar Series , University of Texas Institute for Geophysics | Feb 2020 |
| Seminar Series, University of Puerto Rico at Humacao | Jun 2019 |
| Seminar Series, Dept. of Physics, University of Arkansas | Sep 2018 |
| Guest Lecturer, Department of Geology, University of Puerto Rico at Mayagüez | Sep 2016 |
| Physics Colloquium, Department of Physics and Astronomy, Bates College | Oct 2012 |

Topic: Diversity & Inclusion

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| Invited Speaker, Latinx Research Week, University of Michigan | Mar 2024 |
| Invited Speaker, Astrobiology Program, The Open University | Dec 2021 |
| Planetary Science Seminar Series, Jet Propulsion Laboratory | May 2021 |
| Ocean Worlds Panel, Planetary Science and Astrobiology Decadal Survey | Apr 2021 |
| Lunch Bunch Seminar, Brown University | Oct 2020 |

Topic: Impact Cratering

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| Seminar Series, Southwest Research Institute, San Antonio, TX | Feb 2018 |
| Seminar Series, Department of Geology, University of Puerto Rico at Mayagüez | Jan 2017 |
| Seminar Series, Arecibo Observatory | Dec 2013 |
| Lunch Bunch Series, Department of Geological Sciences, Brown University | Feb 2012 |

SELECTED
WHITE
PAPERS

Planetary Science and Astrobiology Decadal Survey (2023-2032)

- [10] Méndez, A., **Rivera-Valentín, E. G.**, et al., Habitability models for planetary science. BAAS, doi:[10.3847/25c2cfef.20609a88](https://doi.org/10.3847/25c2cfef.20609a88).
- [9] Rathbun, J., **Rivera-Valentín, E. G.** et al., Who is missing in Planetary Science?: Strategic recommendations to improve the diversity of the field. BAAS, doi:[10.3847/25c2cfef.da96f3af](https://doi.org/10.3847/25c2cfef.da96f3af).
- [8] **Rivera-Valentín, E. G.** et al., The importance of ground-based radar observations for planetary exploration. BAAS, doi:[10.3847/25c2cfef.70729c26](https://doi.org/10.3847/25c2cfef.70729c26).
- [7] **Rivera-Valentín, E. G.** et al., Resolving the water cycle on a salty Mars: Planetary science and astrobiology exploration strategies for the next decade. BAAS, doi:[10.3847/25c2cfef.b0e3963b](https://doi.org/10.3847/25c2cfef.b0e3963b).
- [6] **Rivera-Valentín, E. G.** et al., Who is missing in Planetary Science?: A demographic study of the planetary science workforce. BAAS, doi:[10.3847/25c2cfef.968ed505](https://doi.org/10.3847/25c2cfef.968ed505).
- [5] Schenk, P., **Rivera-Valentín, E. G.**, et al. The chronology problem in the outer Solar System: Constraining the "when" of major dynamical and geological events. BAAS, doi:[10.3847/25c2cfef.0a5342b1](https://doi.org/10.3847/25c2cfef.0a5342b1).
- [4] Strauss, B. E., et al. including **Rivera-Valentín, E. G.**, Nonbinary systems: Looking towards the future of gender equity in planetary science. BAAS, doi:[10.3847/25c2cfef.3dda24c5](https://doi.org/10.3847/25c2cfef.3dda24c5).
- [3] Taylor, P. A., **Rivera-Valentín, E. G.**, Bonsall, A., Ground-based radar for planetary science and planetary defense. BAAS, doi:[10.3847/25c2cfef.79d7fef6](https://doi.org/10.3847/25c2cfef.79d7fef6).
- [2] Vander Kaaden, K. E., et al. including **Rivera-Valentín, E. G.**, Creating Inclusive, Supportive, and Safe Environments in Planetary Science for Members of the LGBTQ+ Community. BAAS, doi:[10.3847/25c2cfef.bf7d9e04](https://doi.org/10.3847/25c2cfef.bf7d9e04).
- [1] Virkki, A. K., et al. including **Rivera-Valentín, E. G.**, Near-Earth object characterization using ground-based radar systems. BAAS, doi:[10.3847/25c2cfef.d819e46b](https://doi.org/10.3847/25c2cfef.d819e46b).

Decadal Survey on Astronomy and Astrophysics 2020

- [3] Bonsall, A., et al. including **Rivera-Valentín, E. G.**, GBT Planetary Radar System. BAAS, [51\(3\)](#).
- [2] Campbell, B., et al. including **Rivera-Valentín, E. G.**, Radar astronomy for planetary surface studies. BAAS, [51\(3\)](#).
- [1] Taylor, P. A., **Rivera-Valentín, E. G.**, et al., Planetary radar astronomy with ground-based astrophysical assets. BAAS, [51\(3\)](#).

ANNOUNCEMENTS *Students & Postdocs advised indicated by* *
& NOTES

- [11] 2023. Jackson, B., Diniega, S., Titus, T., Soto, A., **Rivera-Valentín, E. G.**, The Nitty-Gritty Forces That Shape Planetary Surfaces. *EOS*, 104.
- [10] 2022. **Rivera-Valentín, E. G.**, The importance of IDEA in Planetary Science. *LBIB*, 169.
- [9] 2022. **Rivera-Valentín, E. G.**, Summary of the Advancing IDEA in Planetary Science Conference, *LPIB*, 169.
- [8] 2021. Taylor, P. A., **Rivera-Valentín, E. G.**, Fall of an icon: The past, present, and future of Arecibo Observatory. *LPIB*, 165.
- [7] 2020. **Rivera-Valentín, E. G.**, Salty water everywhere, nor any drop to drink. *Nature Astronomy*, *Behind the Paper*.
- [6] 2019. **Rivera-Valentín, E. G.**, Reimagining terraforming. *Nature Astronomy*, News & Views, doi:10.1038/s41550-019-0908-7.
- [5] 2019. Virkki, A. K., et al. including **Rivera-Valentín, E. G.**, Discovery announcement of binary system near-Earth asteroid 2016 AZ8. *CBET* 4593.
- [4] 2018. Bhiravarasu, S. S. *, **Rivera-Valentín, E. G.**, et al., Arecibo Radar Observations of Dwarf Planet 1 Ceres During the 2018 Apparition. *Research Notes of the AAS*, 2, 232, doi:10.3847/2515-5172/aaf815.
- [3] 2018. **Rivera-Valentín, E. G.**, Schmelz, J. T., Arecibo weathers the storm. *Nature Astronomy*, Comment, doi:10.1038/s41550-018-0394-3.
- [2] 2017. Brozovic, M., et al. including **Rivera-Valentín, E. G.**, (226514) 2003 UX34 binary asteroid. *CBET* 4353.
- [1] 2017. **Rivera-Valentín, E. G.**, Taylor, P. A., Virkki, A., and Aponte Hernandez, B., (163693) Atira Binary Asteroid System. *CBET* 4347.

REFEREED
JOURNAL
PUBLICATIONS

- [50] 2024. Fassett, C. I., et al. including **Rivera-Valentín, E. G.**, An Improved Orthorectification and Empirical Reduction of Topographic Effects in Monostatic Mini-RF S-band Observations of the Moon. *Planetary Science Journal*, doi:10.3847/PSJ/ad0a61.
- [49] 2024. Kirchoff, M. R., Barr, A., Bland, M., Bray, V., **Rivera-Valentín, E. G.**, Schenk, P., Chapter 8: The cratering record of Ganymede. *Book: Ganymede*, ISBN: 9781108832953.
- [48] 2024. **Rivera-Valentín, E. G.**, Fassett, C. I., Denevi, B. W., Meyer, H. M., Neish, C. D., Morgan, G. A., Cahill, J. T., Stickle, A. M., Patterson, G. W., Mini-RF S-band Radar Characterization of a Lunar South Pole-Crossing Tycho Ray: Implications for Sampling Strategies. *Planetary Science Journal*, doi:10.3847/PSJ/ad320d.
- [47] 2023. DellaGiustina, D. N., et al. including **Rivera-Valentín, E. G.**, OSIRIS-APEX: An OSIRIS-REx Extended Mission to Asteroid Apophis. *Planetary Science Journal*, doi:10.3847/PSJ/acf75e.
- [46] 2023. Glantzberg, A. K., et al. including **Rivera-Valentín, E. G.**, Investigating the Stability and Distribution of Surface Ice in Mercury's Northernmost Craters. *Planetary Science Journal*, doi:10.3847/PSJ/acd68d.
- [45] 2023. Gough, R. V., Nuding, D. L., Martínez, G. M., **Rivera-Valentín, E. G.**, Primm, K. M., Tolbert, M. A., Laboratory studies of brine growth kinetics relevant to deliquescence on Mars. *Planetary Science Journal*, doi:10.3847/PSJ/acbd98.
- [44] 2023. Phillips, M. S., et al. including **Rivera-Valentín, E. G.**, Salt constructs in paleo-lake basins as high-priority astrobiology targets. *Remote Sensing*, doi:10.3390/rs15020314.
- [43] 2023. Seligman, D. Z., et al. including **Rivera-Valentín, E. G.**, Dark Comets? Unexpectedly large nongravitational accelerations on a sample of small asteroids. *Planetary Science Journal*, doi:10.3847/PSJ/acb697.

- [42] 2023. Virkki, A. K., Neish, C. D., **Rivera-Valentín, E. G.**, Bhiravarasu, S. S., Hickson, D. C., Nolan, M. C., Orosei, R., Planetary Radar - State-of-the-Art Review. *Remote Sensing*, doi:10.3390/rs15235605.
- [41] 2022. Chevrier, V. F., Fitting, A. B., **Rivera-Valentín, E. G.**, Limited stability of multicomponent brines on the surface of Mars. *Planetary Science Journal*, doi:10.3847/PSJ/ac6603.
- [40] 2022. Chevrier, V. F., Fitting, A., El Senousy, A., **Rivera-Valentín, E. G.**, Thermodynamic modeling of perchlorate/chloride and perchlorate/chlorate deliquescence at Mars-relevant temperatures. *Geochimica et Cosmochimica Acta*, doi:10.1016/j.gca.2022.06.011.
- [39] 2022. Fernanda Zambrano-Marin, L., et al. including **Rivera-Valentín, E. G.**, Radar and optical characterization of near-Earth asteroid 2019 OK. *Planetary Science Journal*, doi:10.3847/PSJ/ac63cd.
- [38] 2022. López Oquendo, A., et al. including **Rivera-Valentín, E. G.**, Physical characterization of 2015 JD₁: A possibly inhomogeneous near-Earth asteroid. *Planetary Science Journal*, doi:10.3847/PSJ/ac7e4f.
- [37] 2022. Micheluz, A. Pinzari, F., **Rivera-Valentín, E. G.**, Manente, S., Hallsworth, J. E., Biophysical manipulation of the extracellular environment by *Eurotium halophilicum*. *Pathogens*, doi:10.3390/pathogens11121462.
- [36] 2022. **Rivera-Valentín, E. G.**, Meyer, H. M., Taylor, P. A., Mazarico, E., Bhiravarasu, S. S.^{*}, Virkki, A. K., Nolan, M. C., Chabot, N. L., and Giorgini, J. D., Arecibo S-band radar characterization of local-scale heterogeneities within Mercury's North Polar deposits. *Planetary Science Journal*, doi:10.3847/PSJ/ac54a0.
- [35] 2022. Slank, R.^{*}, **Rivera-Valentín, E. G.**, Chevrier, V. F., Experimental constraints on deliquescence of calcium perchlorate mixed with a Mars regolith analog. *Planetary Science Journal*, doi:10.3847/PSJ/ac75c4.
- [34] 2022. Virkki, A. K. et al. including **Rivera-Valentín, E. G.**, Arecibo planetary radar observations of near-Earth asteroids: 2017 December - 2019 December. *Planetary Science Journal*, doi:10.3847/PSJ/ac8b72.
- [33] 2021. Aponte-Hernandez, B.^{*}, **Rivera-Valentín, E. G.**, Kirchoff, M. R., Schenk, P. M., Morphometric study of craters on Saturn's moon Rhea. *Planetary Science Journal*, doi:10.3847/PSJ/ac32d4.
- [32] 2021. Dalle Ore, C. M., et al. including **Rivera-Valentín, E. G.**, Dione's wispy terrain: A cryovolcanic story. *Planetary Science Journal*, doi:10.3847/PSJ/abe7ec.
- [31] 2021. Fernanders, M. S., et al. including **Rivera-Valentín, E. G.**, Water uptake by chlorate salts under Mars-relevant conditions. *Icarus*, doi:10.1016/j.icarus.2021.114715.
- [30] 2021. Méndez, A., **Rivera-Valentín, E. G.**, et al., Habitability models for Astrobiology. *Astrobiology*, doi:10.1089/ast.2020.2342.
- [29] 2021. Nypaver, C. A.^{*}, Thomson, B. J., Fassett, C. I., **Rivera-Valentín, E. G.**, Patterson, G. W., Prolonged rock exhumation at the rims of kilometer-scale lunar craters. *JGR Planets*, doi:10.1029/2021JE006897.
- [28] 2021. **Rivera-Valentín, E. G.**, Filiberto, J., Lynch, K. L., Mamajanov, I., Lyons, T. W., Schulte, M., Méndez, A., Introduction - First Billion Years: Habitability. *Astrobiology*, doi:10.1089/ast.2020.2314.
- [27] 2021. Shepard, M. K., et al. including **Rivera-Valentín, E. G.**, Asteroid 16 Psyche: Shape, features, and global map. *Planetary Science Journal*, doi:10.3847/PSJ/abfdbb.
- [26] 2020. Chevrier, V. F., **Rivera-Valentín, E. G.**, Soto, A., Altheide, T. S., Global temporal and geographic stability of brines on present-day Mars. *Planetary Science Journal*, doi:10.3847/PSJ/abbc14.

- [25] 2020. **Rivera-Valentín, E. G.**, Chevrier, V. F., Soto, A., Martínez, G., Distribution and habitability of (meta)stable brines on present-day Mars. *Nature Astronomy*, doi:[10.1038/s41550-020-1080-9](https://doi.org/10.1038/s41550-020-1080-9).
- [24] 2020. Schenk, P., Kirchoff, M., Hoogenboom, T., **Rivera-Valentín, E. G.**, The anatomy of fresh complex craters on the mid-sized icy moons of Saturn and self-secondary cratering at the rayed crater Inktomi (Rhea). *Meteoritics & Planetary Science*, doi:[10.1111/maps.13592](https://doi.org/10.1111/maps.13592).
- [23] 2020. Treiman, A. H., Filiberto, J., **Rivera-Valentín, E. G.**, How good is "good enough?": Major element chemical analysis of planetary basalts by spacecraft instruments. *Planetary Science Journal*, doi:[10.3847/PSJ/abbc05](https://doi.org/10.3847/PSJ/abbc05).
- [22] 2019. Rožek, A., et al. including **Rivera-Valentín, E. G.**, Shape model and spin-state analysis of PHA contact binary (85990) 1999 JV6 from combined radar and optical observations. *Astronomy & Astrophysics*, doi:[10.1051/0004-6361/201936302](https://doi.org/10.1051/0004-6361/201936302).
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