Dr. Kennda L. Lynch

Staff Scientist

Lunar and Planetary Science Institute/USRA

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URL: https://www.lpi.usra.edu/science/staff/lynch/

EDUCATION

PhD, Colorado School of Mines, Environmental Science & Engineering, 2015

Dissertation: A geobiological investigation of the hypersaline sediments of Pilot Valley, Utah: A potential terrestrial analogue to ancient lake basins on Mars

M.S. University of Colorado at Boulder, Aerospace Engineering Sciences, 2008

Dual B.S. University of Illinois, General Engineering and Biology, 1999

Engineering Concentration: Space Life Sciences & Advanced Life Support

AREAS OF PROFESSIONAL EXPERTISE AND INTEREST

- Astrobiology, planetary habitability, and planetary analog research
- Geomicrobiology of hypersaline sediments
- Microbial ecology of extreme environments
- Bio-resource engineering for development of closed-loop life support systems
- Development of *in situ* instrumentation for robotic exploration
- Teaching, mentoring, and STEM curriculum development (both collegiate and K-12)
- Science Communication

PROFESSIONAL EXPERIENCE

Lunar and Planetary Institute, Houston, TX

June 2019 – Present Staff Scientist
April 2022 – Present LPI Liaison for Strategic Science Partnerships

University of Houston Clear Lake, Houston TX

Feb 2020 – Present Visiting Research Faculty

Georgia Institute of Technology, Atlanta, GA

Oct 2016 – May 2019 Postdoctoral Research Fellow

University of Montana, Missoula, MT

Feb 2016 - Oct 2016 Postdoctoral Research Fellow

Jacobs Sverdrup/ Lockheed Martin Space Operations, Houston, TX

2003-2006 Senior Research Engineer, JSC Astrobiology Group, ARES
2001- 2003 Project Engineer, International Space Station Program

Abbott Laboratories, North Chicago, IL

2000-2001 Metrology Engineer, Corporate Engineering Division

The Boeing Company, International Space Station Program, Houston, TX

1997-1999 Cooperative Education Student, Hardware/Software Integration

Honeywell, Micro Switch Division, Freeport, IL

Summer 1993 Engineering Intern through University of Illinois Imprint Program

RESEARCH EXPERIENCE

Colorado School of Mines, Golden, CO

2008-2015 Research Scholar, Geo & Environmental Microbiology Lab

University of Colorado, Boulder, CO

Spring 2008 LASP Research Assistant
2006-2008 BioServe Space Technologies Research Assistant

University of Illinois, Urbana-Champaign, IL

1998-1999 Team Leader & Founder: Undergraduate Microgravity Research Team

NASA Kennedy Space Center, Cape Canaveral, FL

Summer 1995 Space Life Science Training Program Participant

Virginia Institute of Marine Science, Gloucester Point, VA

Summer 1994 Howard Hughes REU Research Assistant

CAREER DEVELOPMENT & TRAINING

EU-US Marine Bioinformatics Course	2013
NASA-JPL Planetary Science Summer School	2010
University of Denver Summer Institute	2009
NASA-Nordic Astrobiology Winter School	2005
NASA Astrobiology Institute Geology Insight Course	2003

FIELD EXPERIENCE

DIG MARS, Iceland Lakes Study Project, Iceland	2021 - Present
Dallol Hydrothermal System, Danakil Depression, Ethiopia	2019
Great Salt Lake Desert Mars Analog Field Project, Utah, USA	2010 - Present
Mars Analog Research & Technology Experiment, Rio Tinto, Spain	2003 - 2005
Cashes Ledge Ecosystem Project, Gulf of Maine	1994, 1995

TEACHING AND MENTORING EXPERIENCE

Lunar and Planetary Institute, Houston, TX

Summer 2022 Mentor – LPI Intern, Will Wallentine
Summer 2020, 2021 Mentor - LPI Intern, Camille Goodale

University of Houston Clear Lake, Houston, TX

Fall 2021 – Present Mentor, M.S. Student Jessica Lopez
Fall 2019 - Fall 2021 Mentor, M.S. Student Prathyushasai Machineni

Georgia Institute of Technology, Atlanta, GA

Fall 2017 Embedded Scientist, First Year Composition Course
2017-2019 Co-Mentor, GaTech Undergrad Lauren Kimbrough
Summer 2017 Co-Mentor, GaTech Summer REU student Tyia Pratt

Colorado School of Mines, Golden, CO

2013-2018 Mentor, SAGANet Virtual Mentoring Program
2013-2014 Mentor, CSM undergrads Chris Matthews & Nohemi Almaraz
2011-2013 Teaching Fellow for Bechtel K-5 Educational Initiative
2010-2011 Laboratory Instructor for BELS 311 (Gen. Bio. Laboratory 1)

University of Colorado, Boulder, CO

2007-2008 Graduate Mentor for SMART Summer Program
Fall 2007 Teaching Assistant for ASTR/GEOL 3300 (Extraterrestrial Life)
2006-2007 Co-Faculty Mentor for ASEN 4018/4028 Senior Project Design

NASA Johnson Space Center, Houston, TX

2005 Mentor, JSC Co-ops: Madhurita Sengupta & Laura Sarmiento

Summer 2004 Mentor, HS Student Jennifer Hsu, NASA SHARP Program

University of Illinois, College of Engineering, Urbana-Champaign, IL

1997-1999 Engineering 100 Program Director
1996 Engineering 100 Learning Assistant
Fall 1998 Teaching Assistant for GE 221 (Intro. to Engineering Design)
1996-1997 Teaching Assistant for GE 199 (Intro. to General Engineering)

REFEREED JOURNAL AND CONFERENCE PUBLICATIONS

1. **K. L. Lynch,** K. Rey, R. J. Bond, J. F. Biddle, J. R. Spear, and J. Munakata-Marr. Discrete community assemblages within hypersaline paleolake sediments along a geochemical transect in the Great Salt Lake desert, Utah. *(In Review)*
2. E. G. Rivera Valentin, A. Mendez, **K. L. Lynch**, and A. Soto. Habitat Suitability Index Models for Mars. (*In Review)*
3. E. G. Rivera-Valentín, J. Filiberto, **K. L. Lynch**, I Mamajanov, T.W. Lyons, M. Schulte, A. Méndez (2021). First Billion Years: Habitability. A*strobiology, 21(8), 893-905. doi:10.1089/ast.2020.2314*
4. A. Méndez, E. G. Rivera-Valentín, et al. including **K. L. Lynch** (2021). Habitability Models for Astrobiology. *Astrobiology, 21(8), 1017-1027. doi:10.1089/ast.2020.2342*
5. B. L. Carrier, D. W. Beaty, et al. including **K. L. Lynch** (2020). Mars Extant Life: What's Next? Conference Report, *Astrobiology*. doi:10.1089/ast.2020.2237
6. **K. L. Lynch**., W. A. Jackson, K. Rey, J. R. Spear, R. Frank, and J. Munakata-Marr (2019), Evidence for Biotic Perchlorate Reduction in Naturally Perchlorate-Rich Sediments of Pilot Valley Basin, Utah, *Astrobiology,* 19(5), 629-641. doi:10.1089/ast.2018.1864
7. L.E. Hays, H. V. Graham, D. J. Des Marais, E. M. Hausrath, B. Horgan, T. M. McCollom, M. N. Parenteau, S. L. Potter-McIntyre, A. J. Williams and **K. L. Lynch** (2017). Biosignature Preservation and Detection in Mars Analog Environments. *Astrobiology,* 17(4): 363-400.
8. S.D. Domagal-Goldman, K.E. Wright, K. Adamala, L. Arina de la Rubia, J. Bond, L.R. Dartnell, A.D. Goldman, **K.L. Lynch,** and 41 others. (2016) The Astrobiology Primer v2.0. *Astrobiology*, 16: 561-653.
9. **K. L. Lynch,** B. H. Horgan, J. Munakata-Marr, J. Hanley, R. J. Schneider, K. A. Rey, J. R. Spear, W.A. Jackson and S. M. Ritter (2015). Near-infrared spectroscopy of lacustrine sediments in the Great Salt Lake Desert: An analog study for Martian paleolake basins. *Journal of Geophysical Research: Planets* 120(3): 599-623.
10. B. A. Jones, M. F. Vogt, M. Chaffin, M. Choukroun, N. Ehsan, L. J. Gibbons, **K. L. Lynch**, K. N. Singer, D. G. Blackburn, G. A. DiBraccio, D. Gleeson, A. LeGall, T. McEnulty, E. Rampe, C. Schrader, L. Seward, I.B. Smith, C. C. C. Tsang, P. Williamson, J. Castillo, C. Budney. Concept for a New Frontiers Mission to Ganymede: A Planetary Science Summer School Study. *IEEE Aerospace Systems Conference*. March 5th-12th, 2011. Big Sky, Montana. Paper #1783

SELECTED CONFERENCE PAPERS AND PRESENTATIONS

1. **Lynch, K. L**., E. G. Rivera-Valentín, A. Soto, V. F. Chevrier, and A. Méndez Terrestrial Validation of a Habitat Suitability Model for Brine Environments on Mars. 53rd Lunar and Planetary Science Conference. 53rd Lunar and Planetary Science Conference, March 2022. LPI Contribution No. 2678.

2. **K. L. Lynch**, J. J. Wray, K. A. Rey, and R. J. Bond**.** "Habitability and Preservation Potential of the Bottomset Deposits in Jezero Crater." *Fourth landing site workshop for the Mars 2020 rover mission,* October 16-19, 2018*.* Glendale, CA.
3. **K. L. Lynch**, W. A. Jackson, J. R. Spear, R. F. Rosenzweig, and J. Munakata Marr. "Investigating the Coexistence of Perchlorate Reducing Bacteria and Naturally Occurring Perchlorate-Rich Sediments in the Pilot Valley Paleolake Basin." *Astrobiology Science Conference (AbSciCon*). April 24-28th, 2017. Mesa, AZ.
4. **K. L. Lynch** and J.J. Wray. "Exploring Habitability, Hydrology, and Climate Change on Mars at Columbus Crater." *First Landing Site/Exploration Zone Workshop for Human Missions to the Surface of Mars*, October 27-30, 2015. Houston, Texas. LPI Contribution No. 1879, p.1041.
5. **K. L. Lynch,** B. H. Horgan, J. Munakata-Marr, J. Hanley, R. J. Schneider, K. A. Rey, J. R. Spear, W.A. Jackson and S. M. Ritter. "Microbial Ecology of Hypersaline Paleolake Sediments Along a Geological Transect in the Great Salt Lake Desert, Utah: A Habitability Model for Early Mars." *Astrobiology Science Conference (AbSciCon*). June 15-19th, 2015. Chicago, IL.
6. **K. L. Lynch. "**Investigating the Habitability of Paleolake Basins on Earth and Mars." *Society for Advancement of Hispanics/Chicanos and Native Americans in Science (SACNAS) Annual Conference*. October 16-18th, 2014. Los Angeles, CA*. (Invited)*
7. **K. L. Lynch**, B. H. Horgan, J. Hanley, K. A. Rey, R. J. Schneider, W.A. Jackson, Scott Ritter, J. R. Spear, J. Munakata Marr. "Near-Infrared Spectroscopy of sediments in the Great Salt Lake Desert, Utah: Analogs for Lacustrine Environments on Early Mars." *Society for Advancement of Hispanics/Chicanos and Native Americans in Science (SACNAS) Annual Conference*. October 16-18th, 2014. Los Angeles, CA.
8. **K. L. Lynch**, K. M. McGuire, S.M. Ritter, R.J. Schneider, J. Munakata Marr. The Great Salt Lake Desert: Exploring the Habitability of Paleolakes on Earth and Mars. *Third Conference on Early Mars: Geologic, Hydrologic, and Climatic Evolution and the Implications for Life.* #1680. May 21st -25th, 2012. Lake Tahoe, Nevada. (poster)
9. **K. L. Lynch**. Development of Automated Sample Extraction and Preparation System for Astrobiology in situ Research Applications. *62nd International Astronautical Congress. Space Life Sciences Symposium, Session: Astrobiology & Exploration*. Paper #IAC-11-A1.5.8. October 3-7th, 2011. Cape Town, South Africa.
10. **K. Lynch**, C. Galindo, D. Garrison. Automated Sample Preparation for Life Detection Technologies. *Astrobiology Graduate Student Conference*. April 13-14th, 2008. Santa Clara, CA.

For a complete list, please see http://KenndaLynch.com

RESEARCH GRANTS *(PAST & CURRENT)*

Total in PI funded Grants so far: $231,682 (does not include funding from PhD)

CURRENT

Project: ***Plant Trek*: Investigating Strategies for Regolith Pre-Conditioning to Support the Establishment of Plant-Microbe Systems in Martian Habitats**
Source: NASA Space Biology: Plant Studies
PI: Kennda Lynch
Performance Period: ~1/10/2023 – 1/09/2024
Award: $99,997
Time Commitment: 0.13 FTE

Project: ***Mars Exploration Rovers Portal to Observations, Resources, and Tools to Advance Legacy Science (MER PORTAL)***
Source: NASA PDART
PI: Shoshanna Cole
Role: Co-I
Performance Period: 10/01/2022 – 9/30//2025
Award: $300,000
Time Commitment: PY1: 0.05, PY2: 0.04, PY3: 0.025

Project: ***Planetary Resources and Content Heroes (ReaCH)***
Source: NASA Science Activation Program
PI: Andrew Shaner
Role: Co-I
Award: $4,858,732
Period: 01/2021 – 12/2025
Time Commitment: 0.05 FTE in Y1/Y2/Y5, and 0.08 FTE Y3 & Y4

PAST

Project: ***Machine Learning Approach for Planetary Science: Developing Agnostic Biosignature Capability***
Source: USRA IR&D
PI: Meytar Sorek-Hamer
Role: Co-I
Award: $10,000
Performance Period: 11/01/2021 - 09/30/2022
Time Commitment: 0.025 FTE

Project: ***The Biologic Potential of the Martian Subsurface via Brine Production Through Atmosphere-Regolith Interactions***
Source: NASA Habitable Worlds Program
PI: Edgard Rivera-Valentín
Role: Co-I
Award:
Period: 09/27/2017 - 03/22/2022
Time Commitment: 0.02 FTE between 10/01/2021 - 03/22/2022

Project: ***The Iceland Lakes Project: Characterizing & Understanding the Astrobiological Implications of Groundwater-influenced Alteration processes in Basaltic Terrains as analogs for Transitional Subsurface Habitable Zones on Mars***
Source: USRA Internal Research and Development Program
PI: Dr. Kennda Lynch
Award: $35,000
Period: 10/01/2019 – 9/30/2021

Project: ***Investigating the Metabolic and Environmental Flexibility of Biological Perchlorate Reduction in a Mars analog environment***
Source: Ford Foundation Fellowship Program - http://nationalacademies.org/ford

PI: Dr. Kennda Lynch
Award: $45,000
Period: 06/01/2018 - 06/01/2019

Project: ***Investigating the Geobiology of Pilot Valley Basin, Utah: A Mars Analog Study of a Groundwater-dominated Paleolake Basin***
Source: NASA Astrobiology Institute, Center Director's Discretionary Fund
PI: Dr. Kennda Lynch, Georgia Institute of Technology & Georgia Tech NAI Lead Team: Rediscovering the Past.
Award: $51,685
Period: 2/1/2016 - 10/1/2016 (Extension & Add'l funding granted through 05/28/2018)

Project: ***Perchlorate, Water, and Life: the geomicrobiology of Mars analog soils***
Source: NASA Astrobiology Institute, Center Director's Discretionary Fund
PI: Dr. Mark Claire, University of Washington
Role: Co-I
Award: $62,879
Period: 11/23/2010 - 05/31/2012

Project: ***Unambiguous Detection of Extraterrestrial Microbial Metabolic Activity Using Differential Electrochemical Detection***
Source: NASA Astrobiology Science and Technology Instrument Development
PI: Dr. Samuel Kounaves, Tufts University
Role: Graduate Student (significant assistance in writing final grant text)
Award: $1,213,843
Period: 10/01/2005 - 09/30/2008

PROFESSIONAL SERVICE

Plant the Moon Challenge Advisory Board	2022 - Present
MEPAG Steering Committee Member, IDEA rep	2021 - Present
OPAG Steering Committee Member	2021 - Present
Inter-AG IDEA Working Group AG Representative	2021 - Present
NASA Ames Center for Life Detection, External Advisory Board	2021 - Present
Co-Lead Convener, Ancient & Future Brines (BAS)	2022 - Present
Organizing Committee, Brines Across the Solar System (BAS)	2020 - 2023
Organizing Committee, Science Objectives for Human Exp of Mars	May 2022
Session Co-Convener (4 sessions) AbSciCon, Atlanta, GA	May 2022
Co-Convener, Advancing IDEA in Planetary Science Meeting	April 2022
USRA Diversity, Equity, and Inclusion Committee	2020 - 2022
Session Co-Convener (3 sessions) AbSciCon, Seattle, WA	June 2019
Organizing Committee, FBY: Habitability, Big Sky Montana	September 2019
Advisor to the Organizing Committee, AbGradCon, Georgia Tech	June 2018
Organizing Committee, Astrobiology Colloquium, Georgia Tech	March 2018
Organizing Committee, Symposium on Space Innovations	October 2017
Session Chair, 4th International Conference on Early Mars	October 2017
Session Chair, Life in the Cosmos Symposium, Georgia Tech	September 2017

Session Convener, Astrobiology Science Conference	2015
ISE Alumni Board Member, University of Illinois	2012 - 2019
New Perspectives Panel Member, Third Conference on Early Mars	2012
Organizing Committee, Astrobiology Graduate Conference	2011
Co-Coordinator, Astrobiology Research Focus Group (RFG)	2011
Mars Panel Rapporteur, NRC Planetary Science Decadal Survey	2010
President's Committee on Diversity, Colorado School of Mines	2008-2013
Proceedings Editor, NASA Next Generation Exploration Conference	2006
Brightest Stars Foundation, Founding Board Member	2006-2008
NSBE Space Special Interest Group, Public Relations Director	2004-2008

REFEREE SERVICES

Journals & Books - *JGR Planets, Geobiology, Astrobiology, Planetary and Space Science, Planetary Science Journal, International Journal of Astrobiology, GEOLOGY*

Grants Proposals - NASA ROSES Programs Panel Member (2016- Present)**,** NASA ROSES Programs External Reviewer (2016-Present)

INVITED TALKS

Columbus State University	September 2022
NASA Ames Space Science and Astrobiology Division	July 2022
UT Austin, Center for Planetary System Habitability	January 2022
University of St. Andrews, Virtual	November 2021
Conference of Ford Fellows, Virtual	October 2021
University of California Davis	May 2021
American Museum of Natural History, EPS Seminar	May 2021
University of Tennessee, Knoxville	April 2021
Wesleyan University	April 2021
Woods Hole Oceanographic Institute	February 2021
UCLA & UC Berkeley Joint Seminar	January 2021
Williams College	November 2020
University of Texas Austin – Institute for Geophysics	October 2020
MetaSUB International Annual Meeting (plenary), Virtual	August 2020
Conference of Ford Fellows, Puerto Rico	October 2019
Arecibo Observatory, Puerto Rico	October 2019
Dept. Biological Sciences, University of Houston-Clear Lake	September 2019
Dept. Biological Sciences, University of Alberta	August 2018
Planetary Science Seminar, Georgia Institute of Technology	January 2017
Helena Engineers Club, Helena MT	November 2015
SACNAS Annual Conference, Los Angeles, CA	October 2015
Earth Science Seminar, Montana State University	February 2014
Astrobiology Coffee Hour, Arizona State University	January 2013
ISE Engineer in Residence, University of Illinois	2011, 2013
Coates Research Group, University of California-Berkeley	October 2008

HONORS

USRA Spot Award	2021
Featured in Episode 2 of Netflix Series "Alien Worlds"	2020
Featured in YouTube Series "Glad You Asked"	2019
Featured in Episode 9 of Netflix Series "Explained"	2018
Alumni Profile, Industrial and Enterprise Systems Engineering, UIUC	2017
Student Journal Paper Award, 2nd Place, Colorado School of Mines	2015
Outstanding Graduate Presentation, SACNAS National Conference	2014
FameLab USA, Season 2 - Wild Card	2013
MS PHD's (http://www.msphds.org/) - Cohort IX Fellow	2012
NASA Student Ambassador - Cohort II	2010
Apex Award of Excellence - NSBE Magazine: Contributing Writer	2007
Profiled in Women in Aerospace: Cool Careers on the Final Frontier	2003
NASA Special Scientific Achievement Awards – (5 total awards)	2003
Knight of St. Patrick, University of Illinois (Engineering Highest Honor)	1999
Boeing Quality Pride Award for Outstanding Performance	1998, 1999
NSBE Technical Paper Contest, 1st Place Winner	1996

SCHOLARSHIPS, FELLOWSHIPS, and TRAVEL GRANTS

Early Career Collaboration Award, NASA Astrobiology Program	2019-2022
Ford Foundation Postdoctoral Fellowship ($45K)	2018-2019
Mars Student Travel Award ($1K), NASA Mars Program Office	2006/09/12/15
"On To the Future" Meeting Registration Grant, GSA ($115)	2013
Career Development Award ($1K), Lunar & Planetary Institute	2013
Carl Storm Minority Fellowship ($600), Gordon Conferences	2013
Bechtel K-5 Educational Initiative Fellowship ($60K)	2011-2013
Edna Bailey Sussman Foundation Summer Internship Award ($3K)	2009
NASA Harriet Jenkins Predoctoral Fellowship ($90K)	2008-2011
AGEP Fellowship, Colorado Diversity Initiative ($25K)	2006
NAI Travel Award ($2K), NASA Astrobiology Institute	2004, 2010, 2011
The Boeing Company Scholarship ($3K)	1999
Department of General Engineering Alumni Award ($1K)	1997, 1998
University of Illinois President's Scholarship (full tuition & fees)	1993-1998

SELECTED WHITE PAPERS

1. E. G. Rivera-Valentin, **K. L. Lynch**. A Consensus Report on Recommendations from the 2022 Advancing IDEA in Planetary Science Conference.
2. Stamenkovic, V., **Lynch, K**., et al. (2021). Deep Trek: Science of Subsurface Habitability & Life on Mars. Bulletin of the AAS, 53(4). https://doi.org/10.3847/25c2cfeb.dc18f731
3. Edwards, C., Stamenkovic, V., Boston, P., **Lynch, K.,** et al. (2021). Deep Trek: Mission Concepts for Exploring Subsurface Habitability & Life on Mars — A Window into

Subsurface Life in the Solar System. *Bulletin of the AAS*, *53*(4). https://doi.org/10.3847/25c2cfeb.5f50cebc

4. Rivera-Valentín, E., Martínez, G., Filiberto, J., **Lynch, K**., et al. (2021). Resolving the water cycle on a salty Mars: Planetary science and astrobiology exploration strategies for the next decade. *Bulletin of the AAS*, *53*(4). https://doi.org/10.3847/25c2cfeb.b0e3963b
5. Rivera-Valentín, E., Rathbun, J., Keane, J. T., **Lynch, K**., Richey, C., Diniega, S., & Vertesi, J. (2021). Who is missing in Planetary Science?: A demographic study of the planetary science workforce. *Bulletin of the AAS*, *53*(4). https://doi.org/10.3847/25c2cfeb.968ed505
6. Horgan, B., Bishop, J. L., et al. including **Lynch, K.** (2021). The evolution of habitable environments on terrestrial planets: Insights and knowledge gaps from studying the geologic record of Mars. *Bulletin of the AAS*, *53*(4). https://doi.org/10.3847/25c2cfeb.54561bbb
7. **R. Schingler, K. Lynch** (editors). Proceedings of the Next Generation Exploration Conference. October 2006. NASA CP-2006-214551.
8. M. S. Allen (editor), D. Archer, B. Ehlmann, C. Fasset, A. Fraeman, N. Lanza, **K. Lynch**, M. Rice, L. Roach, V. Swisher, N. Tosca; (2007). Summary of Discussion Sessions at the 2007 Colloquium on Astrobiology and Mars Exploration, Unpublished white paper, 23 p, posted August 2007 by the Mars Exploration Program Analysis Group (MEPAG) at http://mepag.jpl.nasa.gov/workshop/index.html

MEDIA COVERAGE

StarTalk Radio with Neil DeGrasse Tyson
https://startalkmedia.com/show/alien-worlds-and-extremophiles-with-kennda-lynch/

Earth at the Crossroads: Can the Study of Other Worlds Help Us Save This One?
https://www.seti.org/earth-crossroads-can-study-other-worlds-help-us-save-one#athome

National Geographic – Why signs of life on Mars remain so mysterious
https://www.nationalgeographic.com/science/article/why-signs-of-life-on-mars-remain-so-mysterious

Radio Times NPR Podcast – The Mars mission and future of commercial space travel
https://whyy.org/episodes/the-mars-mission-and-the-future-of-commercial-space-travel/

NASA Spotlight – Black History Month
https://www.nasa.gov/image-feature/astrobiologist-kennda-lynch-uses-analogs-on-earth-to-find-life-on-mars

New York Times Article on Mars 2020
https://www.nytimes.com/2020/07/28/science/nasa-jezero-perseverance.html

Nature Article on Mars 2020
https://www.nature.com/articles/d41586-020-02257-w

Nature Article on Three 2020 Mars Launches
https://www.nature.com/articles/d41586-020-01861-0

Gravity Assist Podcast with Jim Green

https://www.nasa.gov/mediacast/gravity-assist-looking-for-life-in-ancient-lakes

Mars 2020 Spotlight video with NASA Astrobiology - Countdown to Mars
https://astrobiology.nasa.gov/countdown-to-mars/

New York Academy of Science - What will it Take to Bring Humans to Mars (Formerly a SXSW Panel revised into a virtual panel by NYAS)
https://www.nyas.org/ebriefings/2020/what-will-it-take-to-bring-humans-to-mars/

Woods Hole Oceanographic Institution - Ocean Encounters Public Event
https://www.whoi.edu/multimedia/oceans-beyond-earth/

EDUCATIONAL PUBLICATIONS

K. Lynch "WALL●E: Saving the Earth, Forecasting the Future" (Feature Story). NSBE Bridge Magazine. Summer 2008 Issue

K. Lynch "Learning Life on Mars". Magazine of the National Society of Black Engineers (NSBE). March/April, 2007. Vol. 18. #4:57-59.

PROFESSIONAL REFERENCES

Dr. Edgard Rivera Valentín
Senior Planetary Scientist
Applied Physics Laboratory, Johns Hopkins University
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Dr. James Wray
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Manager, Research Office
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