# Edwin Kite

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U.S. permanent resident, U.K. citizen.


**Appointments:**

**University of Chicago: January 2015 –**
Assistant Professor.

**Princeton University: January 2014 – December 2014**
Harry Hess Fellow. Joint postdoc, Astrophysics and Geoscience departments.

**California Institute of Technology: January 2012 – January 2014**
O.K. Earl Fellow (Divisional fellowship), Division of Geological & Planetary Sciences

**Education:**

*M.Sci & B.A.* **Cambridge University: June 2007**
M.Sci Natural Sciences Tripos (Geological Sciences). First Class.
B.A. Natural Sciences Tripos (Geological Sciences). First Class.

*Ph.D.* **University of California, Berkeley: December 2011**
Berkeley Fellowship.

**Awards and Distinctions:**

National Academy of Sciences - Committee on Astrobiology and Planetary Science 2017-
American Geophysical Union - Greeley Early Career Award in Planetary Science 2016.
AGU Editor's Citation for Excellence in Refereeing for *JGR-Planets* 2017.
National Academy of Sciences - CAS Forum for New Leaders in Space Science 2015-2016.
Caltech O.K. Earl Postdoctoral Fellowship 2012-2013 (Division-wide fellowship).
AAAS Newcomb Cleveland Prize 2009 (most outstanding *Science* paper; shared).
High-school leaving examination results (A-levels) among the top five in England.

**Papers**

___ = *mentee*

40. **Kite, E.S.**, "Geologic constraints on Early Mars climate," submitted.
39. **Kite, E.S.**, & Ford, E., "Habitability of exoplanet waterworlds," minor revisions requested by ***Astrophysical Journal***, arXiv:1801.00748.
38. **Kite, E.S.**, Gaidos, E., & Onstott, T.C., 2018, "Valuing life detection missions," arXiv:1802.09006, ***Astrobiology***, in press.
37. **Kite, E.S.**, Mischna, M., Gao, P., & Yung, Y., "Mars climate optimum initiated by atmospheric collapse," in revision, arXiv:1709.08302.
36. Holo, S., **Kite, E.S.**, & Robbins, S.J., 2018, "Mars obliquity history constrained by elliptic crater orientations," ***Earth & Planetary Science Letters***, in press.
35. Mansfield, M., **Kite, E.S.**, & Mischna, M., 2018, "Effect of Mars atmospheric loss on snow melt potential in a 3.5-Gyr climate evolution model," arXiv:1802.10422, ***Journal of Geophysical Research – Planets***, doi:10.1002/2017JE005422.
34. Seybold, H.J., **Kite, E.S.**, & Kirchner, J., 2018, "Branching geometry of valley networks on Mars and Earth and its implications for early Martian climate," ***Science Advances***, in press, arXiv:1709.09834.
33. Archer, D., **Kite, E.S.**, & Lusk, G., "The ultimate social cost of carbon," in review.
32. Steele, L., **Kite, E.S.**, & Michaels, T.I., 2018. "Crater mound formation by wind erosion on Mars," ***Journal of Geophysical Research – Planets***, 123, 113-130, doi:10.1002/2017JE005459.
31. Gabasova, L., & **Kite, E.S.**, 2018. "Compaction and sedimentary basin analysis on Mars," ***Planetary & Space Science***, 152, 86-106, doi:10.1016/j.pss.2017.12.021.
30. **Kite, E.S.**, Gao, P., Goldblatt, C., Mischna, M., Mayer, D.P., & Yung, Y., 2017. "Methane bursts as a trigger for intermittent lake-forming climates on post-Noachian Mars," ***Nature Geoscience***, 10, 737-740.

29. Spencer, J., Nimmo, F., Ingersoll, A., Hurford, T.A., **Kite, E.S.**, Rhoden, A., Schmidt, J., & Howett, C.J.A., "Plume origins and plumbing (ocean to surface)," accepted for publication in: Schenk, P., et al., eds., *Enceladus and the Icy Moons of Saturn*, University of Arizona Press.

28. **Kite, E.S.**, Sneed, J., Mayer, D.P., & Wilson, S.A., 2017. "Persistent or repeated surface habitability on Mars," ***Geophysical Research Letters***, 44, 3991-3999, doi:10.1002/2017GL072660.

27. **Kite, E.S.**, & Mayer, D.P., 2017. "Mars sedimentary rock erosion rates constrained using crater counts, with applications to organic-matter preservation and to the global dust cycle," ***Icarus***, 286, 212-222, doi:10.1016/j.icarus.2016.10.010.

26. Melwani Daswani, M., & **Kite, E.S.**, 2017. "Paleohydrology on Mars constrained by mass balance and minerology of pre-Amazonian sodium chloride lakes: Deep groundwater not required", ***Journal of Geophysical Research – Planets***, 122, 1802-1823, doi:10.1002/2017JE005319.

25. **Kite, E.S.**, Sneed, J., Mayer, D.P., Lewis, K.W., Michaels, T.I., Hore, A., & Rafkin, S.C.R., 2016. "Evolution of major sedimentary mounds on Mars," ***Journal of Geophysical Research – Planets***, 121, 2282-2324, doi:10.1002/2016JE005135

24. **Kite, E.S.**, Fegley, B., Schaefer, L., & Gaidos, E., 2016. "Atmosphere-interior exchange on hot rocky exoplanets," ***Astrophysical Journal***, 828, 80, 20 pp, doi:10.3847/0004-637X/828/2/80

23. **Kite, E.S.**, & Rubin, A., 2016. "Sustained eruptions on Enceladus explained by turbulent dissipation in tiger stripes," ***Proceedings of the National Academy of Sciences***, 113, 3972-3975, doi:10.1073/pnas.1520507113.

22. Richter, F., Chaussidon, M., Mendybaev, R., & **Kite, E.S.**, 2016. "Reassessing the cooling rate and geologic setting of Martian nakhlite meteorites, with special emphasis on MIL 03346 and NWA 817," ***Geochimica et Cosmochima Acta***, 182, 1-23, doi:10.1016/j.gca.2016.02.020.

21. Ehlmann, B., and 46 others including **Kite, E.S.**, 2016. "The Sustainability of Habitability on Terrestrial Planets: Insights, Questions, and Needed Measurements from Mars for Understanding the Evolution of Earth-like Worlds," ***Journal of Geophysical Research – Planets***, doi: 10.1002/2016JE005134.

20. **Kite, E.S.**, Howard, A., Lucas, A., & Lewis, K.W., 2015. "Resolving the era of river-forming climates on Mars using stratigraphic logs of river-deposit dimensions," ***Earth & Planetary Science Letters***, 420, 55-65, doi:10.1016/j.epsl.2015.03.019

19. **Kite, E.S.**, Howard, A., Lucas, A., Armstrong, J.C., Aharonson, O., & Lamb, M.P., 2015. "Stratigraphy of Aeolis Dorsa, Mars: stratigraphic context of the great river deposits," ***Icarus***, 253, 223-242.

18. Borlina, C., Ehlmann, B.L., & **Kite, E.S.**, 2015. "Modeling the thermal and physical evolution of Mount Sharp's sedimentary rocks, Gale Crater, Mars," ***Journal of Geophysical Research – Planets***, doi:10.1002/2015JE004799.

17. **Kite, E.S.**, Williams, J.-P., Lucas, A., & Aharonson, O., 2014. "Low palaeopressure of the Martian atmosphere estimated from the size distribution of ancient craters," ***Nature Geoscience***, 7, 335-339.

16. **Kite, E.S.**, Lucas, A., & C.I. Fassett, 2013b. "Pacing Early Mars river activity," ***Icarus***, 225, 850-855.

15. **Kite, E.S.**, Lewis, K.W., Lamb, M.P., Newman, C.E., & Richardson, M.I., 2013. "Growth and form of the mound in Gale Crater, Mars: Slope-wind enhanced erosion and transport," ***Geology***, 41, 543-546, doi:10.1130/G3309.1 (Science "Highlight of the Meeting": Science, 338, 1522).

14. **Kite, E.S.**, Halevy, I., Kahre, M.A., Manga, M., & Wolff, M., 2013a. "Seasonal melting and the formation of sedimentary rocks on Mars," ***Icarus***, 223, 181-210, doi:10.1016/j.icarus.2012.11.034

13. Šrámek, O., McDonough, W., **Kite, E.S.**, Lekić, V., Zhong, S.T., & Dye, W.F., 2013, "Geophysical and geochemical constraints on geoneutrino fluxes from Earth's mantle," ***Earth & Planetary Science Letters***, doi:10.1016/j.epsl.2012.11.001. (Nature Geoscience "Research Highlight": Nature Geoscience, 4, 580).

12. Manga, M., Patel, A., Dufek, J., & **Kite, E.S.**, 2012. "Wet surface and dense atmosphere on early Mars inferred from the bomb sag at Home Plate, Mars," ***Geophysical Research Letters***, doi:10.1029/2011GL050192

11. Mangold, N., **Kite, E.S.**, Kleinhans, M., Newsom, H.E., Ansan, V., Hauber, E., Kraal, E., Quantin-Nataf, C. & K. Tanaka, 2012. "The origin and timing of fluvial activity at Eberswalde Crater, Mars," ***Icarus***, 220, 530-551, doi:10.1016/j.icarus.2012.05.026.

10. Rappaport, S., Levine, A., Chiang, E., El Mellah, I., Jenkin, J., Kalomeni, B., **Kite, E.S.**, Kotson, M., Nelson, L., Rousseau-Nepton, & Tran, K., 2012. "Possible disintegrating short-period Super-Mercury orbiting KIC 12557548," ***Astrophysical Journal***, 752.

9. **Kite, E.S.**, Rafkin, S.C.R., Michaels, T.I., Dietrich, W.E., & Manga, M., 2011b. "Chaos terrain, storms, and past climate on Mars," ***Journal of Geophysical Research – Planets***, 116, E10002, 26 pp., doi:10.1029/2010JE003792 ("Research Highlight" at Nature Geoscience).

8. **Kite, E.S.**, Michaels, T.I., Rafkin, S.C.R., Manga, M., & W.E. Dietrich, 2011a. "Localized precipitation and runoff on Mars," ***Journal of Geophysical Research – Planets***, 116, E07002, 20 pp. doi:10.1029/2010JE003783. (Reported by "New Scientist").

7. **Kite, E.S.**, Gaidos, E. & M. Manga, 2011. "Climate instability on tidally locked exoplanets," ***Astrophysical Journal***, 743, 41, 12 pp, doi:10.1088/0004-637X/743/1/

6. Chiang, E., **Kite, E.**, Kalas, P., Graham, J. R., & Clampin, M., 2009. "Fomalhaut's Debris Disk and Planet: Constraining the Mass and Orbit of Fomalhaut b Using Disk Morphology," ***Astrophysical Journal***, 693, 734-749, doi:10.1088/0004-637X/693/1/734

5. **Kite, E.S.**, Matsuyama, I., Manga, M., Perron, J.T., & Mitrovica, J.X., 2009. "True polar wander driven by late-stage volcanism and the distribution of paleopolar deposits on Mars," ***Earth Planet. Sci. Lett***, 280, 254–267, doi:10.1016/j.epsl.2009.01.040.

4. **Kite, E.S.**, Manga, M., & Gaidos, E., 2009. "Geodynamics and rate of volcanism on massive Earth-like planets," ***Astrophysical Journal***, 700, 1732-1749, doi:10.1088/0004-637X/700/2/1732.

3. Kalas, P., Graham, J. R., Chiang, E., Fitzgerald, M. P., Clampin, M., **Kite, E. S.**, Stapelfeldt, K., Marois, C., & Krist, J., 2008. "Optical Images of a Planet 25 Light Years from Earth," ***Science***, 322, 1345-1348, doi:10.1126/science.1166609. (*Science* #2 "Breakthrough of the Year).

2. **Kite, E.S.**, & R.C.A. Hindmarsh, 2007. "Did ice streams shape the largest channels on Mars?," ***Geophysical Research Letters***, 34, L19202, doi:10.1029/2007GL030530.

1. **Kite, E.S.**, 2004. "Jupiter exploration: high risks and high rewards," ***EoS: Trans. AGU***, 85(50), 544

**In preparation**

- **Kite, E.S.**, & Mayer, D.P., "The scale of Mars rivers."
- **Kite, E.S.**, "Outgassed atmospheres on exoplanets."
- Sneed, J., **Kite, E.S.**, & Mayer, D.P., "Thick atmosphere or rainfall on Early Mars inferred from erosion isotropy."
- **Kite, E.S.**, & Melwani Daswani, M., "Geochemical constraints on global hydrology on Early Mars."

**Advising**

PhD program: advisor for Samuel Holo (UChicago, 2021-anticipated), Megan Mansfield (UChicago, 2021-anticipated: advising jointly with J. Bean), Alexandra (Sasha) Warren (UChicago, 2023-anticipated) & Megan Barnett (UChicago, 2023-anticipated: advising jointly with F. Ciesla). PhD thesis advisory committee for Predrag Popovic (UChicago, 2019-anticipated), Jennika Greer (UChicago, 2021-anticipated), Jade Checlair (UChicago, 2021-anticipated), Adrien Sy (UChicago, 2022-anticipated) & Andrew Malone (UChicago, 2017). MSci thesis advisory committee for Matous Ptacek (UChicago, 2018-anticipated) & Nathan Baskin (UChicago, 2015-2016).
Visiting graduate student advisor for Martin Turbet (U. Paris) (to visit 6/2018-10/2018; advising jointly with D. Abbot) & Gaia Stucky de Quay (Imperial College London) (3/2018 - 10/2018). Summer project advisor for Leila Gabasova (University of Paris) (2015) & Bowen Fan (Peking University) (2017).
Postdoctoral advisor for Mohit Melwani Daswani (UChicago, 2015-2017) & Liam Steele (UChicago, 2017-).

**Former lab members and former visitors:**

Jonathan Sneed, full-time Mars research assistant 2016-2018:
*Entering the Planetary Science PhD program at UCLA in Fall 2018*
Mohit Melwani Daswani, postdoc 2015-2017:
*Now starting a position at NASA Jet Propulsion Laboratory, Pasadena, CA*
David Mayer, planetary GIS/data specialist 2015-2017:
*Now at US Geological Survey (USGS) Astrogeology Program, Flagstaff, AZ*
Leila Gabasova, 2015 summer student:
*Now a PhD student at Institut de Planétologie et Astrophysique de Grenoble, France*

**Teaching:**

*As instructor:*

GEOS 38600. Earth and Planetary Surface Processes.
(University of Chicago: Winter 2017; Fall 2018). New class.

GEOS 32060 / GEOS 22060 / ASTR 45900, What makes a planet habitable?
(University of Chicago: Winter 2016; Spring 2018). Entirely revamped class.

*Other:*

Instructor at Rossbypalooza 2018 (climate science summer school).

Invited speaker at public events for Adler Planetarium, student science societies, University of Chicago Physical Science Division.

Published 6 introductory-level science outreach / education articles in *Astronomy Now*, *Chemistry Review*, *Earth Space Review*, and *Spaceflight Now*.

**Invited talks**

Penn State (4/2018); U. T. Austin (6/2018, 10/2012); University of Minnesota (4/2018); University of Bern (4/2017); AGU Fall Meeting (12/2016); Enceladus Focus Group (Berkeley, 6/2016); Arizona State University (2/2016); McGill University (10/2015); NIU (9/2015); University of Washington (5/2015); Planetary and Space Sciences Research Institute (UK) (2/2015); Kavli Institute of Theoretical Physics (2/2015); University of Illinois (1/2015), NOAA GFDL (12/2014); Rice University (9/2014); Columbia University / Earth Institute (3/2014); Weizmann Institute of Science (Israel) (6/2013); University of Arizona (4/2013); Princeton (3/2013); Johns Hopkins (3/2013); University of Chicago (3/2013); UCLA (11/2012); iPLEX (10/2012); JPL Science Division (7/2012); Purdue (4/2012); UC Santa Cruz (10/2011); Space Sciences Laboratory (11/2010); JPL Mars Exploration Directorate (11/2010); AGU Fall Meeting (12/2009); SETI Institute (5/2009); UC Santa Cruz (5/2009).

**Major external grant support:**

PI, NASA Solar System Workings grant (geomorphology), 2015-2018.

PI, NASA Exoplanet Research Program grant (water-rock reactions), 2016-2019.

PI, NASA Mars Data Analysis Program grant, 2016-2019.

PI, NASA Solar System Workings grant (climate science), 2016-2019.

(Full text of all Kite-led proposals: geosci.uchicago.edu/∼kite/proposals)

Co-I, NASA Mars Data Analysis Program grant, 2016-2019.

Co-I, NASA Mars Data Analysis Program grant, 2018-2022.

**Reviewer for:** *Science, Nature, Nature Geoscience, Astrophysical Journal Letters*, *Earth & Planetary Science Letters*, *Geophysical Research Letters*, *Geology*, *Journal of Geophysical Research – Planets*, *Icarus*, *Physics of the Earth & Planetary Interiors*, *Meteoritics & Planetary Science*, *Planetary & Space Science*, *Geochemistry Geophysics Geosystems*, *Earth and Space Science*, *Aeolian Research*, *Astrobiology*, *Journal of Maps*, *Intl. Journal of Astrobiology*, European Research Council, Oxford University Press, Science and Technology Facilities Council (United Kingdom), Hungarian Science Agency, Fonds de recherce du Québec, NASA HEOMD, NASA Postdoctoral Program, NASA Astrobiology Institute, NASA SMD (panelist for HW, EW, MDAP).

**Selected research or mission design experience at locations other than college or graduate school:**

*Visiting Associate at JPL* (2012-2015): Multiple projects.
*Weizmann Institute, Israel* (2013): Visiting scholar.
*JPL Planetary Science Summer School* (2010): PI in mission design exercise (Io Explorer).
*Carl Sagan Center, SETI Institute, Mountain View* (2010): Stereo topography.
*Kavli Institute for Theoretical Physics* (2008): Deep Earth Summer School.
*Summer Science Program* (2001): Asteroid orbit determination. Ojai campus.

**Telescope experience:**

*Hubble Space Telescope:* Co-I on GO/DD Program 11818 (PI: Paul Kalas).
*Spitzer Space Telescope:* Warm IRAC phase curves of exoplanet HAT-P-7b (PI: Heather Knutson).
+ assisted with observing at Shane Telescope, Mt. Hamilton Observatory.

**Field experience:**

Central India (Proterozoic paleobiology). Greece, SE Spain, England, Scotland, California, Hawaii (fieldwork, mapping courses). NW Spain (independent mapping project, 6 weeks). Utah (GSI for Professor W. Alvarez; and terrestrial-analog fieldwork).

**Service:** Time Allocation Committee, Research Computing Center, University of Chicago
Admissions Commitee, Summer Science Program
Committee for Astrobiology and Planetary Science, National Academy of Sciences
>200 images acquired based on my suggestions, Mars Reconnaissance Orbiter HiRISE

+ departmental committees as assigned (Admissions, Chamberlin Fellowship, e.t.c.)

**First-authored presentations at conferences, workshops, e.t.c.:**

**Kite, E.S.**, "Key parameters for Early Mars climate research," talk, *for presentation at 49th Lunar and Planetary Science Conference.*

**Kite, E.S.**, Mayer, D.P., Duncan, C.J., & Edward, D., "A new global database of Mars river dimensions," *for presentation at 49th Lunar and Planetary Science Conference.*

**Kite, E.S.**, 2017, "Geologic Tests for Snowmelt Runoff on Early Mars" (invited), *AGU Fall Meeting.*

**Kite, E.S.**, 2017, "Cycle-independent planetary habitability: how volatile delivery loads the dice," *Workshop on The Origins of Volatiles in Habitable Planets: The Solar System and Beyond*.

**Kite, E.S.**, "An ice-and-snow hypothesis for Early Mars, and the runoff-production test," talk, *Fourth International Conference on Early Mars*.

**Kite, E.S.**, Gao, P., Mischna, M., Mayer, D.P., Goldblatt, C., & Yung, Y., "Methane burst climate scenarios for Early Mars rivers and lakes," *Fourth International Conference on Early Mars*.

**Kite, E.S.**, Mischna, M., Gao, P., & Yung, Y., 2017, "Climate optimum on Mars initiated by atmospheric collapse?," talk, *48th Lunar and Planetary Science Conference*.

**Kite, E.S.**, Sneed, J., Mayer, D.P., Wilson, S., 2016, "Mars alluvial fan formation during the Amazonian and Late Hesperian spanned >10 Myr," *48th Lunar and Planetary Science Conference*.

**Kite, E.S.**, Sneed, J., Mayer, D.P., Lewis, K.W., Michaels, T.I., Hore, A., & Rafkin, S.C.R., 2016, "Making major mounds on Mars: shaping by wind-terrain feedbacks," invited talk, *AGU Fall Meeting*.

**Kite, E.S.**, Goldblatt., C., Gao, P., Mayer, D.P., Sneed, J., & Wilson, S.A., 2016, "A Narrowing Target for Early Mars Climate: Which Models Survive the Confrontation with Improved Hydrology Constraints?," talk, *AGU Fall Meeting*.

**Kite, E.S** Goldblatt, C., & Gao, P., 2016, "Cadence and cause of lake-forming climates on Mars," *American Astronomical Society Division for Planetary Sciences / European Planetary Science Congress*, Pasadena, California.

**Kite, E.S**, 2016, "Sustained Eruptions on Enceladus Explained by Turbulent Dissipation in Tiger Stripes," talk, *Conference on Enceladus and the Icy Moons of Saturn*, Boulder, Colorado.

**Kite, E.S**, 2016, "Sustaining cryovolcanic eruptions via turbulence on Enceladus," talk, *Enceladus Focus Group*, Berkeley, California.

**Kite, E.S**, Armstrong, J.C., Goldblatt, C., Gao, P., & Mayer, D.P., 2016, "Cadence and cause of lake-forming climates on Mars," talk, *47th Lunar and Planetary Science Conference,* abstract #1312.

**Kite, E.S**, Fegley, B., Schaefer, L., & Gaidos, E., 2016, "Volcanism on Magma Planets: Extreme Volcanism is Regulated by Planet Mass, Temperature, and Initial Composition," *47th Lunar and Planetary Science Conference,* abstract #1601.

**Kite, E.S**, "Sustaining cryovolcanic eruptions via turbulence on Enceladus," talk, *National Academy of Science - Chinese Academy of Science Forum for New Leaders in Space Science*, Shanghai, China.

**Kite, E.S**, "Crater count constraints on radiolysis of complex organic matter at 2020 candidate sites," talk, *2nd Landing Site Selection Workshop for the Mars 2020 Rover Mission*, Pasadena, CA

**Kite, E.S**, 2015, "Unscrambling Noachian crater erosion on Mars," talk, *Workshop on Issues in Crater Studies and the Dating of Planetary Surfaces*, Laurel, MD.

**Kite, E.S**, 2015, "Extending the reach of Mars rover drills by targeting high-erosion-rate sites identified using orbiter imagery and wind-erosion models," talk, *Astrobiology Science Conference 2015*, Chicago, IL.

**Kite, E.S**, Armstrong, J.C., Wordsworth, R., & Forget, F., 2015, "Late bursts of habitability on Mars-like planets," talk, *46th Lunar and Planetary Science Conference,* abstract #2674.

**Kite, E.S**, Rubin, A., 2015, "Sustained eruptions on Enceladus explained by turbulent dissipation in tiger stripes," talk, *46th Lunar and Planetary Science Conference*, abstract #1247.

**Kite, E.S**, Lucas, A., Howard, A.D., Armstrong, J.C., & Lamb, M.P., 2014, "Characterizing and modeling late episodes of surface liquid water on Mars," *Binghampton Workshop on Planetary Geomorphology.*

**Kite, E.S**, Lucas, A., Armstrong, J.C., Aharonson, O., & Lamb, M.P., 2014, "Resolving the era of river-forming climates on Mars," talk, *8th International Conference on Mars*, abstract no. 1148.

**Kite, E.S**, Lucas, A., Armstrong, J.C., Aharonson, O., & Lamb, M.P., 2014, "Resolving the great drying of Mars: paleo-climate versus time from river deposits in Aeolis Dorsa," talk, *45th Lunar and Planetary Science Conference.*

**Kite, E.S**, Lucas, A., Armstrong, J., & Aharonson, O., 2013, "Resolving the great drying of Mars: sequence stratigraphy of the Aeolis-Zephyria trough," talk, *Annual Meeting of the American Astronomical Society Division for Planetary Sciences.*

**Kite, E.S.**, Lewis, K.W., Lamb, M.P., Newman, C.E., & Richardson, M.I., 2013, "Possible role for slope winds in forming Gale Crater's mound (and other sediment mounds on Mars): the Slope Wind Enhanced Erosion and Transport hypothesis," Mars, talk, *44th Lunar and Planetary Science Conference.*

**Kite, E.S.**, 2013, "Mass balance constraints on the sustainability of Mars' Recurrent Slope Lineae: should RSL be an astrobiology priority?," talk, *Conference on the Present-Day Habitability of Mars.*

**Kite, E.S.,** and Manga, M., 2012, "Seasonal snowmelt versus impact-triggered runoff in Mars' geologic record of surface liquid water," talk, *Third International Conference on Early Mars.*

**Kite, E.S.**, 2012, "Evidence for melt-fed meandering rivers in the Gale-Aeolis-Zephyria region," Mars, talk, *43rd Lunar and Planetary Science Conference.*

**Kite, E.S.**, Gaidos, E., Manga, M., and Halevy, I., 2012, "(1) Climate instability on planets with large day-night temperature contrasts. (2) Magma planets," talk, *Exoclimes 2.*

**Kite, E.S.**, Gaidos, E., & Manga, M., 2011, "Climate destabilization on tidally locked exoplanets," talk, *AGU Fall Meeting*, P23F-03

**Kite, E.S.**, Manga, M., Halevy, I., & Kahre, M.A., 2012, "Gale as a preferred site for snowmelt-limited induration of atmospherically transported sediment," talk, *5th MSL Landing Site Selection Workshop.*

**Kite, E.S.**, 2012, "Net assessment of the impact hypothesis for fluvial activity at Eberswalde and tests with MSL," talk, *5th MSL Landing Site Selection Workshop.*

**Kite, E. S.**, Manga, M., & Halevy, I., 2011. "Snowmelt model of formation and distribution of sedimentary rocks on Mars: Thick atmosphere not required?," talk, *42nd Lunar and Planetary Science Conference.*

**Kite, E. S.**, Manga, M., & Halevy, I., 2010. "Inevitability of melting at low latitudes on Mars: implications for the sedimentary rock record," *AGU Fall Meeting*, EP43C-0762

**Kite, E. S.**, 2010. "Two new approaches to the Early Mars climate problem," *Jet Propulsion Laboratory*, seminar.

**Kite, E.S.**, Rafkin, S.C.R., Michaels, T.I., Manga, M., & Dietrich, W.E., 2010. "Localized precipitation and channel formation on Mars: Under what conditions can one landing site be a proxy for global environments?" *4th MSL Landing Site Selection Workshop.*

**Kite, E.S.**, Rafkin, S.C.R., Michaels, T.I., & M. Manga, 2010. "Mesoscale simulation of atmospheric response to chaos formation," talk, 41st Lunar and Planetary Science Conference, abstract #1171.

**Kite, E.S.**, Manga, M., & Gaidos, E., 2009. "Magmatic activity on Super-Earths: What do we expect to see?," invited talk, *AGU Fall Meeting* , V21H-07.

**Kite, E.S.**, Rafkin, S.C.R., Michaels, T.I., & M. Manga, 2010. "The snows of Juventae: Mesoscale simulation of atmospheric response to chaos formation," *AGU Fall Meeting*, EP53F-02.

**Kite, E.S.**, 2009, "True Polar Wander and Climate on Late Hesperian/Amazonian Mars", SETI Institute Colloquium. Youtube: http://bit.ly/bHwoZv

**Kite, E.S.**, Manga, M. & J.T. Perron, 2009, 'Evidence for past kilometer-scale overturn(s) in deformed, layered terrain near the deepest point on Mars", 40th Lunar and Planetary Science Conference, abstract #1248.

**Kite, E.S.**, Manga, M., & E. Gaidos, 2008, "Geodynamics and rate of volcanism on massive Earth-like planets", *AGU Fall Meeting*, P13C-1327

**Kite, E.S.**, Hovius, N., Hillier, J.K., & J. Besserer, 2007, "Candidate mud volcanoes in the northern plains of Mars", *AGU Fall Meeting*, P13C-1327

**Kite, E.S.**, Hovius, N., Hillier, J.K., & J. Besserer, 2007, "Candidate mud volcanoes in the northern plains of Mars", *European Mars Science and Exploration Conference*, Noordwijk, The Netherlands.

**Kite, E.S.**, 2006, "Palaeo-ice streams in the Equatorial Transition Zone, Mars," 19th UCL Astronomy Colloquium, Windsor.

**Kite, E.S.**, "Competing hypotheses for the Northwestern Slope Valleys, Mars," in Proceedings of the Third European Workshop on Exo-Astrobiology, 18 - 20 November 2003, Madrid, Spain. Ed.: R. A. Harris & L. Ouwehand. ESA SP-545, Noordwijk, Netherlands: ESA Publications Division, ISBN 92-9092-856-5, 2004, p. 219 - 220

**Selected coauthored presentations: (* = person supervised by Kite)**

Fan, B.*, & **Kite, E.S.**, "Upper limit on a paleo-equatorial ridge from a tidally-disrupted moon of Mars," *for presentation at 49th Lunar and Planetary Science Conference.*

Sneed, J.*, & **Kite, E.S.**, "Erosional anisotropy on Mars as a probe for atmospheric thickness and rainfall versus snowmelt," *for presentation at 49th Lunar and Planetary Science Conference.*

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