

Vitae for John A. Grant III

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Education:

- Brown University, Providence, RI; Ph.D., Geology, 1990.
- University of Rhode Island, Kingston, RI; M.S., Geology, 1986.
- State University College of New York at Plattsburgh, 1982
Plattsburgh, NY; B.A., Geology, 1982, Magna Cum Laude.

Selected Honors:

- 2018 Elected Fellow, Geological Society of America.
- 2017 Recipient, G. K. Gilbert Award, Geological Society of America.
- 2015 Recipient, Deans' Award, College of the Environmental and Live Sciences, URI.
- 2006 Honorary Ph.D., State University of New York, Board of Trustees.
- Multiple NASA Group Achievement Awards for MER, MSL, and InSight missions

Professional Appointments:

- Senior Geologist, Center for Earth and Planetary Studies, National Air and Space Museum, Smithsonian Institution, Washington, DC (2014 to present).
- Geologist, Center for Earth and Planetary Studies, National Air and Space Museum, Smithsonian Institution, Washington, DC (2000 to 2014).
- Chair, Center for Earth and Planetary Studies, National Air and Space Museum, Smithsonian Institution, Washington, DC (2006 to 2011).
- Co-Investigator InSight Mars Lander Geology, Impacts, and ISSWG Science Team Member, (2018 to present).
- Mars Science Laboratory Mission Participating Scientist and Strategic Long Term Planner, (2012 to present).
- Co-Investigator, HiRISE High Resolution Camera for the NASA Mars Reconnaissance Orbiter Mission (2001 to present).
- Co-Investigator Mars Exploration Rovers Science Operations Working Group Chair and Science Team Member, (2002 to 2019).
- Co-Chair, Mars Landing Site Steering Committee, Appointed by NASA Mars Exploration Program Lead Scientist (2000 to 2019).
- Appointed to NASA Steering Committee for Candidate Landing Sites for Humans on Mars (HLS2) (2015 to present).
- Appointed to NASA Planetary Advisory Committee (of the NASA Advisory Council) (2022 to present).
- Appointed to NASA Planetary Sciences Subcommittee (of the NASA Advisory Council) (2010 to 2013).
- Appointed to National Academies COMPLEX (Committee on Planetary Exploration) (2006 to 2008).
- Appointed to Executive Committee of MEPAG (NASA's Mars Exploration Program Analysis Group) (2005-2006).

- Discipline Scientist, NASA Planetary Geology and Geophysics Program, NASA Headquarters, Washington, DC (1998 to 2000).
- Program Scientist, Mars Surveyor 2003 Sample Return Mission to Mars, NASA Headquarters, Washington, DC (1998 to 2000).
- Program Scientist, Mars Global Surveyor Mission to Mars, NASA Headquarters, Washington, DC (1998 to 2000).
- Associate Professor, Earth Science and Science Education SUNY College at Buffalo, Buffalo, NY (1998 to 2000).
- Assistant Professor, Earth Science and Science Education SUNY College at Buffalo, Buffalo, NY (1994 to 1998).

PUBLICATIONS:

Published Peer-Reviewed Journal Articles, Chapters, and Maps:

- Golombek, M., Hudson, T., Pailey, P., Balabanska, N., Marteau, E., Charalambous, C., Baker, M., Lemmon, M., White, B., Lorenz, R. D., Spohn, T., Maki, J., Kallemeyn, P., Garvin, J. B., Newman, C., Hurst, K., Murdoch, N., Williams, N., Banerdt, W. B., Lognonne, P., Delage, P., Lapeyre, R., Gaudin, E., Yana, C., Verdiet, N., Panning, M., Trebi-Ollennu, A., Ali, K., Mittelholz, A., Johnson, C., Langlais, B., Warner, N., Grant, J. A., Daubar, I. J., Ansan, V., Vrettos, C., Spiga, A., Bandfield, D., Gomez, A., Mishra, P., Dotson, R., Krause, C., Sainton, G., and Gabsi, T. (2023). Results from InSight Robotic Arm Activities. *Space Sci. Rev.* 219, 20. <https://doi.org/10.1007/s11214-023-00964-0>.
- McEwen A. S., Byrne, S., Hansen, C., Daubar, I. J., Sutton, S., Dundas, C. M., Bardabelias, N., Baugh, N., Bergstrom, J., Beyer, R., Block, K. M., Bray, V. J., Bridges, J. C., Chojnacki, M., Conway, S. J., Delamere, W. A., Ebben, T., Espinoza, A., Fennema, A., Grant, J. A., Gulick, V. C., Herkenhoff, K. E., Heyd, R., Leis, R., Ojha, L., Papendick, S., Schaller, C., Thomas, N., Tornabene, L. L., Weitz, C., and Wilson, S. A. (2023). The high-resolution imaging science experiment (HiRISE) in the MRO extended science phases (209-2023: Icarus, 115795. <https://doi.org/10.1016/j.icarus.2023.115795>.
- Grant, J. A., S. A. Wilson, M. P. Golombek, A. Trussell, N. H. Warner, N. Williams, C. M. Weitz, H. Abarca, and R. Deen (2022), Degradation at the InSight landing site, Homestead hollow, Mars: Constraints from rock heights and shapes: *Earth and Space Sciences*, 9, e2021EA001953. <https://doi.org/10.1029/2021EA001953>.
- Weitz, C. M., Lewis, K. W., Bishop, J. L., Thomson, B. J., Arvidson, R. E., Grant, J. A., Seelos, K. D., and Ettenborough, I. (2022). Orbital observations of a marker horizon at Gale crater. *Journal of Geophysical Research*. <https://doi.org/10.1029/2021EA001953>.
- Warner, N. H., Golombek, M. P., Ansan, V., Marteau, E., Williams, N., Grant, J. A., Hauber, E., Weitz, C. M., Wilson, S. A., Piqueux, S., Mueller, N., Grott, M., Daubar, I., Garvin, J. B., Charalambous, C., Baker, M., and Banks, M. (2022). In Situ and orbital stratigraphic characteristics of the InSight landing site – The type example of a regolith-covered lava plain on Mars. <https://doi.org/10.1029/2022JE007232>.
- Weitz, C. M., Sullivan, R. J., Baker, M., O’Connell-Cooper, C., Thompson, L., and Grant, J. A. (2022). The Physical Properties and Geochemistry of Grains on Aeolian Bedforms at Gale Crater, Mars. <https://doi.org/10.1029/2022JE007211>.
- Piqueux, S., N. Muller, M. Grott, M. Siefler, E. Millour, F. Forget, M. Lemmon, M. P.

- Golombek, N. Williams, J. A. Grant, N. H. Warner, V. Ansan, I. Daubar, J. Knollenber, J. Maki, A. Spiga, D. Banfield, T. Spohn, S. Smrekar, B. Banerdt (2021), Regolith properties near the InSight lander derived from 50 sols of radiometer measurements: *Journal of Geophysical Research*. <https://doi.org/10.1029/2021JE006859>.
- Mittlefehldt, D. W., Gellert, R., vanBommel, S., Crumpler, L. S., Grant, J. A., Arvidson, R. E., Farrand, W. H., and Morris, R. V. (2021), Geology and geochemistry of Noachian bedrock and alteration events, Meridiani Planum, Mars: MER Opportunity observations: *Journal of Geophysical Research*. <https://doi.org/10.1029/10.1029/2021JE006915>.
- Cohen, B. A., Young, K. E., Zellner, N. E. B., Zacny, K., Yingst, R. A., Watkins, R. N., Warwick, R., Valencia, Swindle, T. D., S., Robbins, S. J., Petro, N. E., Nicoletti, A., Moriarty, D. P., III, Lynch, R. L., Indyk, S. J., Gross, J., Grier, J. A., Grant, J. A., Ginyard, A., Fassett, C. I., Farley, K. A., Farcy, B. J., Ehmann, B. L., Dyar, M. D., Daelemans, Curran, N. M., van der Bogert, C. H., Arevalo, R. D., Jr., Anderson, F. S., (2020), In Situ Geochronology for the next decade: Mission designs for the Moon, Mars, and Vesta: *Planetary Science Journal*, 2, 145. <https://doi.org/10.3847/PSJ/abedbf>.
- Wilson, S. A., J. A. Grant, K. K. Williams (2020), Geologic map of Morava Valles and Margaritifer basin, Mars, MTM Quadrangles -10022 and -15022, U. S. Geol. Surv. Scientific Investigation Map 3489, scale 1:1,000,000.
- Weitz, C. M., Wilson, S. A., Grant, J. A., and Irwin, R. P., III (2020), Geologic map of western Ladon basin, Mars, MTM Quadrangles, -15032 and -20032, USGS Scientific Investigation Map, scale 1:1,000,000, in press.
- Wilson, S. A., Morgan, A. M., Howard, A. D., and Grant, J. A. (2021), The global distribution of craters with alluvial fans and deltas on Mars: *Geophysical Research Letters*. <https://doi.org/10.1029/2020GL091653>.
- Charalambous, C., J. McClean, M. M. Baker, W. T. Pike, M. P. Golombek, M. T. Lemmon, V. Ansan, C. Perrin, A. Spiga, R. D. Lorenz, M. E. Banks, S. Rodriguez, N. Murdoch, C. M. Weitz, J. A. Grant, N. H. Warner, Garvin, J. B., I. J. Daubar, E. Hauber, A. E. Stott, C. L. Johnson, A. M. Mittelholz, T. Warren, S. N. Navarro, S., Sotomayor, J. N. Maki, A. Lucas, D. Banfield, C. Newman, D. Viúdez-Moreiras, J. Pla-García, P. H. Lognonné, W. B. Banerdt (2020), Vortex-dominated aeolian activity at InSight's landing site: Multi-instrument observations, analysis and implications: *J. Geophys. Res.*, <https://doi.org/10.1029/2020JE006757>.
- Baker, M. M., Newman, C., Charalambous, C., Golombek, M. P., Spiga, A., Banfield, D., Lemmon, M., Banks, M., Lorenez, R., Garvin, J. B., Grant, J. A., Lewis, K., Ansan, V., Warner, N., Weitz, C., Wilson, S., and Rodriguez, S. (2020), Vortex-dominated aeolian activity at InSight's landing site, Part 2: threshold conditions and model comparisons: *J. Geophys. Res.* <https://doi.org/10.1029/2020JE006514>.
- Golombek, M. P., A. Trussell, N. Williams, C. Charalambous, H. Abarca, N. H. Warner, M. Deahn, J. A. Grant, R. Deen, and E. Hauber (2021), InSight rock size-frequency distributions on Mars: *Earth and Space Sciences*. <https://doi.org/10.1029/2021EA001959>.
- Golombek, M. P., N. Williams, N. H. Warner, T. Parker, M. G. Williams, I. Daubar, F. Calef, J. A. Grant, P. Bailey, H. Abarca, R. Deen, N. Ruoff, J. Maki A. McEwen, N. Baugh, K. Block, L. Tamppari, J. Call, J. Ladewig, A. Stoltz, W. A., Weems, L. Mora-Sotomayor, and J. Torres (2020), Location and setting of the InSight lander, instruments, and landing site: *Earth and Space Science*. <https://doi.org/10.1029/2020EA001248>.

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- Warner, N. H., A. J. Schuyler, A. D. Rogers, M. P. Golombek, J. A. **Grant**, S. A. Wilson, C. M. Weitz, N. Williams, and F. Calef (2020), Crater morphometry on the mafic floor unit at Jezero crater, Mars: Comparisons to a known basaltic lava plain at the InSight landing site: *Geophysical Research Letters*, <https://doi.org/10.1029/2020GL089607>.
- Weitz, C. M., J. A. **Grant**, M. P. Golombek, N. H. Warner, E. Hauber, V. Ansan, S. A., Wilson, C. Constantinos, M. Williams, F. Calef, W. T. Pike, H. Lethcoe-Wilson, J. Maki, A. DeMott, and M. Kopp (2020), Comparison of InSight Homestead hollow to hollows at the Spirit landing site: *J. Geophys. Res.*, 125. <https://doi.org/10.1029/2020JE006435>.
- Warner, N. H., J. A. **Grant**, S. A. Wilson, M. P. Golombek, A. DeMott, C. Charalambous, E. Hauber, V. Ansan, C. Weitz, W. T. Pike, N. Williams, M. A. Banks, M. Baker, M. Kopp, M. Deahn, and H. Lethcoe-Wilson (2020), An impact crater origin for the InSight landing site at Homestead Hollow: Implications for near surface stratigraphy, surface processes, and erosion rates: *J. Geophys. Res.*, 125. <https://doi.org/10.1029/2019JE006333>.
- Golombek, M. P., N. H. Warner, J. A. **Grant**, E. Hauber, V. Ansan, C. M. Weitz, N. Williams, C. Charalambous, S. A. Wilson, A. DeMott, M. Kopp, H. Lethcoe-Wilson, L. Berger, R. Hausmann, E. Marteau, C. Vrettos, A. Trussell, W. Folkner, S. Le Maistre, N. Mueller, M. Grott, T. Spohn, S. Piqueux, E. Millour, F. Forget, I. Daubar, N. Murdoch, P. Lognonné, C. Perrin, S. Rodriguez, W. T. Pike, T. Parker, J. Maki, H. Abarca, R. Deen, J. Hall, P. Andres, N. Ruoff, F. Calef, S. Smrekar, M. M. Baker, M. Banks, A. Spiga, D. Banfield, J. Garvin, C. E. Newman, and W. B. Banerdt (2020), Geology of the InSight landing site on Mars: *Nature Communications*. <https://doi.org/10.1038/s41467-020-14679-1>.
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- Grant**, J. A., and S. A. Wilson (2019), Evidence for late alluvial activity in Gale crater, Mars: *Geophysical Research Letters*, 46. <https://doi.org/10.1029/2019GL083444>.
- Hughes, M. N., R. E. Arvidson, J. A. **Grant**, S. A. Wilson, A. D. Howard, and M. P. Golombek (2019), Degradation of Endeavour crater based on orbital and rover-based observations in

- combination with landscape evolution modeling: *J. Geophys. Res.*, 124. <https://doi.org/10.1029/2019JE005949>.
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- Weitz, C. M., R. J. Sullivan, M. G. A. Lapotre, S. K. Rowland, J. A. **Grant**, M. Baker, and R. A. Yingst (2018), Sand grains and shapes in Aeolian bedforms at Gale Crater, Mars: *Geophysical Research Letters*, 45. <https://doi.org/10.1029/2018GL078972>.
- Wilson, S. A., J. A. **Grant**, A. D. Howard, and D. L. Buzzkowski (2018), The nature and origin of deposits in Uzboi Vallis on Mars: *J. Geophys. Res.*, 123. <https://doi.org/10.1029/2017JE005508>.
- Mittlefehldt, D. W., R. Gellert, S. van Bommel, D. W. Ming, A. S. Yen, B. C. Clark, R. V. Morris, C. Schroder, L. S. Crumpler, J. A. **Grant**, B. L. Jolliff, R. E. Arvidson, W. H. Farrand, K. E. Herkenhoff, J. F. Bell III, B. A. Cohen, G. Klingelhofer, C. M. Schrader, and J. W. Rice (2018), Diverse lithologies and alteration events on the rim of Noachian-aged Endeavour crater, Meridiani Planum, Mars: In situ compositional evidence: *J. Geophys. Res.*, 123. <https://doi.org/10.1002/2017JE005474>.
- Watters, T. R., C. J., Leuschen, B. A. Campbell, G. A. Morgan, A. Cicchetti, **J. A. Grant**, R. J. Phillips, and J. J. Plaut (2017), Radar sounder evidence of thick, porous sediments in Meridiani Planum and implications for ice-filled deposits on Mars: *Geophysical Research Letters*, 44, 1142-1148, <https://doi.org/10.1002/2017GL074431>.
- Maxwell, T. A., C. V. Haynes, Jr., K. Nicoll, A. K. Johnston, **J. A. Grant**, and A. Kilani (2017), Quaternary history of the Kiseiba Oasis region, southern Egypt: *J. African Earth Sci.*, 136. <https://doi.org/10.1016/j.jafrearsci.2017.04.024>.
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- Hurowitz, J. A., J. P. Grotzinger, W. W. Fischer, S. M. McLennan, R. E. Milliken, N. Stein, A. R. Vasavada, D. F. Blake, E. Dehouck, J. L. Eignebröde, A. G. Farién, L. Frydenvang, R. Gellert, J. A., **Grant**, S. Gupta, K. E. Herkenhoff, D. W. Ming, E. B. Rampe, M. E. Schmidt, K. Siebach, K. Stack-Morgan, D. Y. Sumner, and R. C. Wiens (2017), Redox stratification of an ancient lake in Gale crater, Mars: *Science*, 356. <https://doi.org/10.1126/science.aah6849>.
- Wilson, S. A., A. Howard, J. Moore, and J. A. **Grant** (2016), A Cold-Wet Mid-Latitude Environment on Mars during the Hesperian-Amazonian Transition: Evidence from Northern Arabia Valleys and Paleolakes: *J. Geophys. Res.*, 121, 1667–1694. <https://doi.org/10.1002/2016JE005052>.
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- Grant, J. A., T. J. Parker, L. S. Crumpler, S. A. Wilson, M. P. Golombek, D. W. Mittlefehldt**

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- Crumpler, L. S., R. E. Arvidson, J. Bell, B. C. Clark, B. A., Cohen, W. H. Farrand, R. Gellert, M., Golombek, J. A. **Grant**, E. Guinness, K. E. Herkenhoff, J. R. Johnson, B. Jolliff, D. W. Ming, D. W. Mittlefehldt, T. Parker, J. W. Rice, Jr., S. W. Squyres, R. Sullivan, and A. S. Yen (2016), Context of ancient aqueous environments on Mars from in situ geologic mapping at Endeavour crater: *J. Geophys. Res.*, 120, 538-569. <https://doi.org/10.1002/2013JE004699>.
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- Grant**, J. A., S. A. Wilson-Purdy, N. Mangold, N., F. Calef, and J. P. Grotzinger, J. P. (2014), The timing of alluvial activity in Gale crater, Mars: *Geophysical Research Letters*, 44, 1142-1148. <https://doi.org/10.1002/2013GL058909>.
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