

Timothy A. Goudge

Curriculum Vitae

The University of Texas at Austin
Jackson School of Geosciences
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Austin, TX 78712-1722

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Telephone: +1 (512) 471-4770
www.timgoudge.com
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Pronouns: He/Him

Research Interests

My science is driven by interests in: using remote sensing to investigate the record of surface processes on planetary bodies; reconstructing the ancient martian surface environment from its geology and sedimentary rock record; quantitative analysis of infrared spectroscopy data to remotely characterize mineralogy; and understanding how distinct boundary conditions on planetary surfaces affect sedimentary processes.

Education

Brown University, Providence, Rhode Island, USA
2015 **Doctor of Philosophy (PhD) in Geological Sciences**
Dissertation Title: *Paleolakes on Mars: Insights into timing, morphology, and mineralogy.*
Advisors: Jim Head and Jack Mustard

2012 **Master of Science (ScM) in Geological Sciences**
Advisors: Jim Head and Jack Mustard

Queen's University, Kingston, Ontario, Canada
2009 **Bachelor of Science (BSc) in Geological Engineering**
Focus in Geotechnical Engineering; Graduated Honors, 1st Class

Professional Experience

2019 – Present **Assistant Professor**
Department of Geological Sciences, Jackson School of Geosciences, The University of Texas at Austin

2015 – 2019 **Jackson School Distinguished Postdoctoral Fellow**
Jackson School of Geosciences, The University of Texas at Austin

2010 – 2015 **Graduate Student Research Assistant**
Department of Geological Sciences, Brown University

Refereed Journal Publications

Goudge research group members: #Graduate student, †postdoctoral fellow, §undergraduate student.

2020:

1. †Stucky de Quay, G., **T. A. Goudge**, and C. I. Fassett (2020), Precipitation and aridity constraints from paleolakes on early Mars, *Geology*, 48, 1189–1193, DOI: 10.1130/G47886.1.

2. Cardenas, B. T., D. Mohrig, C. M. Hughes, **T. A. Goudge**, J. S. Levy, T. Swanson, J. Mason, and F. Zhao (2020), The anatomy of exhumed river-channel belts: Bedform- to belt-scale river kinematics of the Ruby Ranch Member, Cretaceous Cedar Mountain Formation, Utah, USA, *Sedimentology*, *67*, 3655–3682, DOI: 10.1111/sed.12765.
3. Swartz, J. M., **T. A. Goudge**, and D. Mohrig (2020), Quantifying coastal fluvial morphodynamics over the last 100 years on the lower Rio Grande, USA and Mexico, *J. Geophys. Res. Earth Surface*, *125*, e2019JF005443, DOI: 10.1029/2019JF005443.
4. Cook, C. W., A. M. Bramson, S. Byrne, J. W. Holt, M. S. Christoffersen, D. Viola, C. M. Dundas, and **T. A. Goudge** (2020), Sparse subsurface radar reflectors in Hellas Planitia, Mars, *Icarus*, *348*, 113847, DOI: 10.1016/j.icarus.2020.113847.
5. Brown, A. J., C. E. Viviano, and **T. A. Goudge** (2020), Olivine-carbonate mineralogy of the Jezero crater region, *J. Geophys. Res. Planets*, *125*, e2019JE006011, DOI: 10.1029/2019JE006011.
6. #Tebolt, M., J. Levy, **T. Goudge**, and N. Schorghofer (2020), Slope, elevation, and thermal inertia trends of martian recurring slope lineae initiation and termination points: Multiple possible processes occurring on coarse, sandy slopes, *Icarus*, *338*, 113536, DOI: 10.1016/j.icarus.2019.113536.

2019:

7. Cardenas, B. T., T. Swanson, **T. A. Goudge**, R. W. Wagner, and D. Mohrig (2019), The effect of remote sensing resolution limits on aeolian sandstone measurements and the reconstruction of ancient dune fields on Mars: Numerical experiment using the Page Sandstone, Earth, *J. Geophys. Res. Planets.*, *124*, 3244–3256, DOI: 10.1029/2019JE006191.
8. Tarnas, J. D., J. F. Mustard, H. Lin, **T. A. Goudge**, E. S. Amador, M. S. Bramble, C. H. Kremer, X. Zhang, Y. Itoh, and M. Parente (2019), Orbital identification of hydrated silica in Jezero crater, Mars, *Geophys. Res. Lett.*, *46*, 12,771–12,782, DOI: 10.1029/2019GL085584.
9. Schorghofer, N., J. S. Levy, and **T. A. Goudge** (2019), High-resolution thermal environment of recurring slope lineae in Palikir crater, Mars, and its implications for volatiles, *J. Geophys. Res. Planets*, *124*, 2852–2862, DOI: 10.1029/2019JE006083.
10. Lim, Y., J. S. Levy, **T. A. Goudge**, and W. Kim (2019), Ice cover as a control on the morphodynamics and stratigraphy of Arctic deltas, *Geology*, *47*, 399–402, DOI: 10.1130/G45146.1.
11. Shahrzad, S., K. M. Kinch, **T. A. Goudge**, C. I. Fassett, D. H. Needham, C. Quantin-Nataf, and C. P. Knudsen (2019), Crater statistics on the dark-toned, mafic floor unit in Jezero Crater, Mars, *Geophys. Res. Lett.*, *46*, 2408–2416, DOI: 10.1029/2018GL081402.
12. Kocurek, G., R. C. Martindale, M. Day, **T. A. Goudge**, C. Kerans, H. J. Hassenruck-Gudipati, J. Mason, B. T. Cardenas, E. I. Petersen, D. Mohrig, D. S. Aylward, C. M. Hughes, and C. M. Nazworth (2018), Antecedent aeolian dune topographic controls on carbonate and evaporite facies: Jurassic Todilto Member, Wanakah Formation, Ghost Ranch, New Mexico, USA, *Sedimentology*, *66*, 808–837, DOI: 10.1111/sed.12518.
13. Bramble, M. S., **T. A. Goudge**, R. E. Milliken, and J. F. Mustard (2019), Testing the deltaic origin of fan deposits at Bradbury crater, Mars, *Icarus*, *319*, 363–366, DOI: 10.1016/j.icarus.2018.09.024.
14. Hughes, C. M., B. T. Cardenas, **T. A. Goudge**, and D. Mohrig (2019), Deltaic deposits indicative of a paleo-coastline at Aeolis Dorsa, Mars, *Icarus*, *317*, 442–453, DOI: 10.1016/j.icarus.2018.08.009.

15. de Haas, T., S. J. Conway, F. E. G. Butcher, J. Levy, P. M. Grindrod, **T. A. Goudge**, and M. R. Balme (2019), Time will tell: Temporal evolution of martian gullies and paleoclimatic implications, *Geol. Soc. London Spec. Pub.* **467**, 165–186, DOI: 10.1144/SP467.1.

2018:

16. **Goudge, T. A.**, C. I. Fassett, and D. Mohrig (2018), Incision of paleolake outlet canyons on Mars from overflow flooding, *Geology*, **47**, 7–10, DOI: 10.1130/G45397.1.
17. **Goudge, T. A.**, and C. I. Fassett (2018), Incision of Licus Vallis, Mars from multiple lake overflow floods, *J. Geophys. Res. Planets*, **123**, 405–420, DOI: 10.1002/2017JE005438.
18. Cardenas, B. T., D. Mohrig, and **T. A. Goudge** (2018), Fluvial stratigraphy of valley fills at Aeolis Dorsa, Mars: Evidence for base-level fluctuations controlled by a downstream water body, *Geol. Soc. Amer. Bull.*, **130**, 484–498, DOI: 10.1130/B31567.1.
19. Liu, Y., **T. A. Goudge**, J. G. Catalano, and A. Wang (2018), Spectral and stratigraphic mapping of hydrated minerals associated with interior layered deposits near the southern wall of Melas Chasma, Mars, *Icarus*, **302**, 62–79, DOI: 10.1016/j.icarus.2017.11.006.
20. **Goudge, T. A.**, D. Mohrig, B. T. Cardenas, C. M. Hughes, and C. I. Fassett (2018), Stratigraphy and paleohydrology of delta channel deposits, Jezero crater, Mars, *Icarus*, **301**, 58–75, DOI: 10.1016/j.icarus.2017.09.034.
21. Salvatore, M. R., **T. A. Goudge**, M. S. Bramble, C. S. Edwards, J. L. Bandfield, E. S. Amador, J. F. Mustard, and P. R. Christensen (2018), Bulk mineralogy of the NE Syrtis and Jezero crater regions of Mars derived through thermal infrared spectral analyses, *Icarus*, **301**, 76–96, DOI: 10.1016/j.icarus.2017.09.019.

2017:

22. **Goudge, T. A.**, J. M. Russell, J. F. Mustard, J. W. Head, and S. Bijaksana (2017), A 40,000 year record of clay mineralogy at Lake Towuti, Indonesia: Paleoclimate reconstruction from reflectance spectroscopy and perspectives on paleolakes on Mars, *Geol. Soc. Amer. Bull.*, **129**, 806–819, DOI: 10.1130/B31569.1.
23. **Goudge, T. A.**, R. E. Milliken, J. W. Head, J. F. Mustard, and C. I. Fassett (2017), Sedimentological evidence for a deltaic origin of the western fan deposit in Jezero crater, Mars and implications for future exploration, *Earth Planet. Sci. Lett.*, **458**, 357–365, DOI: 10.1016/j.epsl.2016.10.056.
24. Levy, J. S., **T. A. Goudge**, J. W. Head, and C. I. Fassett (2017), Candidate volcanic and impact-induced ice depressions on Mars, *Icarus*, **285**, 185–194, DOI: 10.1016/j.icarus.2016.10.021.

2016:

25. **Goudge, T. A.**, C. I. Fassett, J. W. Head, J. F. Mustard, and K. L. Aureli (2016), Insights into surface runoff on early Mars from paleolake basin morphology and stratigraphy, *Geology*, **44**, 419–422, DOI: 10.1130/G37734.1.
26. Weider, S. Z., L. R. Nittler, S. L. Murchie, P. N. Peplowski, T. J. McCoy, L. Kerber, C. Klimczak, C. M. Ernst, **T. A. Goudge**, R. D. Starr, N. R. Izenberg, R. L. Klima, and S. C. Solomon (2016), Evidence from MESSENGER for sulfur- and carbon-driven explosive volcanism on Mercury, *Geophys. Res. Lett.*, **43**, 3653–3661, DOI: 10.1002/2016GL068325.

2015:

27. **Goudge, T. A.**, K. L. Aureli, J. W. Head, C. I. Fassett, and J. F. Mustard (2015), Classification and analysis of candidate impact crater-hosted closed-basin lakes on Mars, *Icarus*, **260**, 346–367, DOI: 10.1016/j.icarus.2015.07.026.

28. Weber, A. K., J. M. Russell, **T. A. Goudge**, M. R. Salvatore, J. F. Mustard, and S. Bijaksana (2015), Characterizing clay mineralogy in Lake Towuti, Indonesia, with reflectance spectroscopy, *J. Paleolimnol.*, *54*, 253–261, DOI: 10.1007/s10933-015-9844-4.
29. **Goudge, T. A.**, J. F. Mustard, J. W. Head, C. I. Fassett, and S. M. Wiseman (2015), Assessing the mineralogy of the watershed and fan deposits of the Jezero crater paleolake system, Mars, *J. Geophys. Res. Planets*, *120*, 775–808, DOI: 10.1002/2014JE004782.
30. Dickson, J. L., J. W. Head, **T. A. Goudge**, and L. Barbieri (2015), Recent climate cycles on Mars: Stratigraphic relationships between multiple generations of gullies and the latitude dependent mantle, *Icarus*, *252*, 83–94, DOI: 10.1016/j.icarus.2014.12.035.
31. **Goudge, T. A.**, J. F. Mustard, J. W. Head, M. R. Salvatore, and S. M. Wiseman (2015), Integrating CRISM and TES hyperspectral data to characterize a halloysite-bearing deposit in Kashira crater, Mars, *Icarus*, *250*, 165–187, DOI: 10.1016/j.icarus.2014.11.034.

2014:

32. **Goudge, T. A.**, J. W. Head, L. Kerber, D. T. Blewett, B. W. Denevi, D. L. Domingue, J. J. Gillis-Davis, K. Gwinner, J. Helbert, G. M. Holsclaw, N. R. Izenberg, R. L. Klima, W. E. McClintock, S. L. Murchie, G. A. Neumann, D. E. Smith, R. G. Strom, Z. Xiao, M. T. Zuber, and S. C. Solomon (2014), Global inventory and characterization of pyroclastic deposits on Mercury: New insights into pyroclastic activity from MESSENGER orbital data, *J. Geophys. Res. Planets*, *119*, 635–658, DOI: 10.1002/2013JE004480.
33. Izenberg, N. R., R. L. Klima, S. L. Murchie, D. T. Blewett, G. M. Holsclaw, W. E. McClintock, E. Malaret, C. Mauceri, F. Vilas, A. L. Sprague, J. Helbert, D. L. Domingue, J. W. Head, **T. A. Goudge**, S. C. Solomon, C. A. Hibbitts, and M. D. Dyar (2014), The low-iron, reduced surface of Mercury as seen in spectral reflectance by MESSENGER, *Icarus*, *228*, 364–374, DOI: 10.1016/j.icarus.2013.10.023.

2012:

34. **Goudge, T. A.**, J. F. Mustard, J. W. Head, and C. I. Fassett (2012), Constraints on the history of open-basin lakes on Mars from the composition and timing of volcanic resurfacing, *J. Geophys. Res. Planets*, *117*, E00J21, DOI: 10.1029/2012JE004115.
35. Watters, T. R., S. C. Solomon, C. Klimczak, A. M. Freed, J. W. Head, C. M. Ernst, D. M. Blair, **T. A. Goudge**, and P. K. Byrne (2012), Extension and contraction within volcanically buried impact craters and basins on Mercury, *Geology*, *40*, 1123–1126, DOI: 10.1130/G33725.1.
36. **Goudge, T. A.**, J. W. Head, J. F. Mustard, and C. I. Fassett (2012), An analysis of open-basin lake deposits on Mars: Evidence for the nature of associated lacustrine deposits and post-lacustrine modification processes, *Icarus*, *219*, 211–229, DOI: 10.1016/j.icarus.2012.02.027.

2011:

37. Head, J. W., C. R. Chapman, R. G. Strom, C. I. Fassett, B. W. Denevi, D. T. Blewett, C. M. Ernst, T. R. Watters, S. C. Solomon, S. L. Murchie, L. M. Prockter, N. L. Chabot, J. J. Gillis-Davis, J. L. Whitten, **T. A. Goudge**, D. M. H. Baker, D. M. Hurwitz, L. R. Ostrach, Z. Xiao, W. J. Merline, L. Kerber, J. L. Dickson, J. Oberst, P. K. Byrne, C. Klimczak, and L. R. Nittler (2011), Flood volcanism in the northern high latitudes of Mercury revealed by MESSENGER, *Science*, *333*, 1853–1856, DOI: 10.1126/science.1211997.

Non-Refereed Publications

1. Piatek, J. L., K. E. Vander Kaaden, **T. A. Goudge**, J. L. Molaro, and M. P. Milazzo (2020), Breaking Down Barriers: Accessibility in Planetary Science, *White Paper for Planetary Science and Astrobiology Decadal Survey 2023-2032*.

2. Diniega, S., J. Castillo-Rogez, I. Daubar, J. Filiberto, **T. Goudge**, K. Lynch, A. Rutledge, J. Rathbun, J. Scully, R. Smith, C. Richey, C. Tai Udovicic, and M. Villarreal (2020), Ensuring a safe and equitable workspace: The importance and feasibility of a Code of Conduct, along with clear policies regarding authorship and team membership, *White Paper for Planetary Science and Astrobiology Decadal Survey 2023-2032*.
3. Horgan, B., J. L. Bishop, A. Brown, W. Calvin, C. Edwards, A. Fraeman, **T. Goudge**, L. C. Kah, E. Kite, K. Lynch, R. M. Ramirez, E. Rampe, W. Rapin, M. Rice, F. Rivera-Hernández, K. Stack, J. Tarnas, A. Treiman, and C. Viviano (2020), The evolution of habitable environments on terrestrial planets: Insights and knowledge gaps from studying the geologic record of Mars, *White Paper for Planetary Science and Astrobiology Decadal Survey 2023-2032*.
4. Murchie, S. L., R. E. Arvidson, J. L. Bishop, W. M. Calvin, J. Carter, J. Christian, R. N. Clark, C. M. Dundas, B. L. Ehlmann, V. K. Fox, A. A. Fraeman, **T. A. Goudge**, B. H. Horgan, M. N. Hughes, E. K. Leask, A. S. McEwen, J. F. Mustard, M. Parente, K. E. Powell, F. P. Seelos, K. D. Seelos, J. D. Tarnas, C. E. Viviano, and J. J. Wray (2020), Maximizing the Science and Resource Mapping Potential of Orbital VSWIR Spectral Measurements of Mars, *White Paper for Planetary Science and Astrobiology Decadal Survey 2023-2032*.
5. Brown, A. J., C. E. Viviano, and **T. A. Goudge** (2020), Mars 2020 team using Australian rocks in search for life on Mars, *Eos*, 101, DOI: 10.1029/2020EO146438.

Teaching

Department of Geological Sciences, The University of Texas at Austin:

Sedimentary Rocks (GEO 416M)

- Fall 2020

Introduction to Remote Sensing for Geoscientists (GEO 471T/491)

- Spring 2020
- Spring 2019; *voted best graduate course by DGS graduate students*

Mars Sedimentology (GEO 291)

- Spring 2016; *co-taught as postdoctoral instructor with David Mohrig*

Additional Teaching Experience:

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| 2014 | Graduate Teaching Assistant; <i>Mars, Moon, and the Earth (GEOL 0050)</i> ; <i>Department of Geological Sciences, Brown University</i> |
| 2014 | Sheridan Teaching Certificate I – Reflective Teaching; <i>The Harriet W. Sheridan Center for Teaching and Learning, Brown University</i> |
| 2007 – 2008 | Undergraduate Teaching Assistant; <i>Earth's Physical Environment (APSC 151)</i> ; <i>Department of Geological Sciences and Geological Engineering, Queen's University</i> |

Student Advising

Postdoctoral Fellows:

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| 2020 – Present | Tian Dong. <i>PhD at Rice University. NSF Postdoctoral Fellow.</i> |
| 2019 – Present | Gaia Stucky de Quay. <i>PhD at Imperial College London.</i> |

Graduate Students:

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| 2020 – Present | Mariel Nelson. <i>BA at University of California, Berkeley.</i> |
| 2020 – Present | Emily Bamber. <i>MSc at University of Oxford.</i> |

2019 – Present Michelle Tebolt. *BA at Colgate University.*

Undergraduate Students:

2020 – Present Junwoo Kim, *Environmental Science Capstone Research Experience, Dept. Geological Sciences, UT Austin. Co-advised w/ G. Stucky de Quay.*

2020 – Present Irineo Sanchez, *Honors Thesis, Dept. Geological Sciences, UT Austin.*

2019 – 2020 Nirvana Kaur, *Dept. Geological Sciences, UT Austin.*

2018 – 2020 Marianne Coholich, *Honors Thesis, Dept. Geological Sciences, UT Austin. Co-advised w/ W. Kim.*

Committee Membership:

PhD:

- Hima Hassenruck-Gudipati, *Department of Geological Sciences, UT Austin. Primary advisor D. Mohrig.*
- Shawn Fullmer, *Department of Geological Sciences, UT Austin. Primary advisor C. Kerans.*
- Paul Morris, *Department of Geological Sciences, UT Austin. Primary advisors J. Covault and D. Mohrig.*
- Cole Speed, *Department of Geological Sciences, UT Austin. Primary advisors Z. Sylvester and D. Mohrig.*
- Kathleen Wilson, *Department of Geological Sciences, UT Austin. Primary advisor D. Mohrig.*
- Sophie Goliber, *Institute for Geophysics, UT Austin. Primary advisor G. Catania.*
- Natalie Wolfenbarger, *Institute for Geophysics, UT Austin. Primary advisor D. Blankenship.*
- Chris Liu, *Department of Geological Sciences, UT Austin. Primary advisor D. Mohrig.*
- Dallas Dunlap, *Bureau of Economic Geology, UT Austin. Primary advisor T. Meckel.*
- Matthew Svensson, *Dept. of Earth Sciences, U. Western Ontario. Primary advisor G. Osinski.*

MSc:

- Nicole Guinn, *Dept. Geological Sciences, UT Austin. Primary advisor J. Gardner. MSc, 2020.*

Undergraduate Honors Thesis:

- Juanita Vargas-Londoño, *Departamento de Ciencias de la Tierra, Universidad EAFIT. Primary advisor J. F. Paniagua-Arroyav. BSc, 2020.*
- Harry Hull, *Dept. Geological Sciences, UT Austin. Primary advisor J. Snedden. BSc, 2019.*
- Jake Gearon, *Dept. Geological Sciences, UT Austin. Primary advisor M. Young. BSc, 2019.*

PhD Qualification Exam:

- Logan Schmidt, *Dept. Geological Sciences, UT Austin. Primary advisor D. Rempe. Exam 4/2019.*

Invited Talks

2020 University of California, Los Angeles/University of California, Berkeley/Jet Propulsion Laboratory, Planetary Science Seminar

2020 GSA Annual Meeting

2020 University of Western Ontario, Western Space Weekly Webinar

2020 The University of Massachusetts Amherst, Department of Geosciences Lecture Series

2020 California Institute of Technology, Geoclub Seminar

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| 2019 | Rice University, Department of Earth, Environmental and Planetary Sciences Colloquium |
| 2019 | Midwestern State University, Kimbell School of Geosciences Colloquium |
| 2019 | The University of Arizona, Lunar and Planetary Laboratory Colloquium |
| 2019 | PICO Presentation, 2019 SEPM Annual Meeting |
| 2019 | Tulane University, Department of Earth and Environmental Sciences Seminar |
| 2018 | GSA Annual Meeting |
| 2018 | McMaster University, School of Geography & Earth Sciences Seminar |
| 2018 | Queen's University, Department of Geological Sciences and Geological Engineering Seminar |
| 2018 | The University of Texas at Austin, Department of Geological Sciences Seminar |
| 2018 | Stanford University, Department of Geological Sciences Seminar |
| 2017 | AGU Fall Meeting |
| 2017 | NASA Marshall Space Flight Center, NSSTC Space Science Seminar |
| 2017 | NASA Ames Research Center, Space Science & Astrobiology Division Seminar |
| 2017 | USGS Menlo Park, Geology, Minerals, Energy and Geophysics Group Seminar |
| 2017 | Southwest Research Institute, Space Science and Engineering Division Seminar |
| 2017 | NASA Jet Propulsion Laboratory, Seminar |
| 2017 | Rice University, Sedimentology Seminar |
| 2017 | 58 th Brown-Vernadsky Microsymposium |
| 2017 | The University of Texas at Austin, UT Institute for Geophysics Seminar |
| 2017 | SETI Institute, Weekly Colloquium |
| 2016 | University of Manitoba, Department of Geological Sciences Seminar |
| 2016 | The University of Texas at Austin, DeFord Lecture Series (Department of Geological Sciences Seminar) |
| 2016 | GSA Annual Meeting |
| 2013 | MIT, Planetary Internal Colloquium Series (PICS) |

Professional Service

To the University:

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| 2020 – Present | Executive Committee, <i>UT Center for Planetary Systems Habitability</i> |
| 2018 – Present | Leadership Committee, <i>UT Geoscience Empowerment Network</i> |
| 2018 – Present | Judge for Jackson School of Geosciences Student Research Symposium |
| 2016 – 2018 | Team member, Pop-Up Institute, <i>Understanding Planetary Habitability</i> |

To the Community:

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| 2020 – Present | Member, AGU Africa Space Science Award Committee |
| 2016 – Present | Judge for Dwornik Award at the Lunar and Planetary Science Conference |
| 2015 – Present | Peer Reviewer for <i>Nature Geoscience</i> ; <i>Geology</i> ; <i>Nature Communications</i> ; <i>Science Advances</i> ; <i>Geophysical Research Letters</i> ; <i>Earth and Planetary Science</i> |

Letters; Geosphere; Scientific Reports; Journal of Geophysical Research – Planets; Journal of Geophysical Research – Earth Surface; Icarus; Astrobiology; Planetary and Space Science; Space Science Reviews; Planetary Data System (PDS)

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| 2015 – Present | Review Panelist and External Reviewer for NASA ROSES |
| 2015 – Present | Judge for Outstanding Student Paper Award at the American Geophysical Union Fall Meeting |
| 2019 | Reviewer for AGU Fall Meeting Travel Grants |
| 2014 – 2018 | Lead advocate for Jezero crater paleolake as a landing site for the NASA Mars 2020 rover |
| 2018 | Program Committee for 49 th Lunar and Planetary Science Conference |
| 2017 | Session Co-Chair at 48 th Lunar and Planetary Science Conference |
| 2014 | Session Co-Chair at 2014 GSA Annual Meeting |

Public Outreach

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| 2020 | Panelist, AIR Centre Roundtable: Oceans in the Solar System |
| 2020 | Guest speaker at Northwest Austin Rotary Club |
| 2020 | Guest speaker at Hot Science – Cool Talks |
| 2019 | Guest speaker at the University of Texas at Austin Undergraduate Geological Society; the Austin Geological Society; Senior University Georgetown; UT GIS Day Lightning Talks; Astronomy on Tap ATX |
| 2018 | Presenter at the 2018 AISD Science + Mathematics X Conference |
| 2011 – 2016 | Volunteer for Mars Exploration Student Data Teams (MESDT) |
| 2011 – 2015 | Vartan-Gregorian Elementary School Volunteer Science Teacher |
| 2014 | Guest speaker at University of Maryland Observatory; Skyscrapers, Inc. |
| 2012 – 2014 | Vartan-Gregorian Elementary School Volunteer Science Teacher Program Organizer |
| 2011 | Judge for Athena Science Challenge |

Academic Honors and Awards

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| 2019 | G. Moses and Carolyn G. Knebel Distinguished Teaching Award <i>Best graduate level geology course, as judged by the students</i> |
| 2018 | National Center for Earth-Surface Dynamics 2 Synthesis Postdoctoral Fellowship |
| 2015 – 2017 | Jackson School Distinguished Postdoctoral Fellowship, The University of Texas at Austin |
| 2012 – 2015 | Natural Sciences and Engineering Research Council of Canada (NSERC) Postgraduate Scholarship |
| 2012, 2013 | GSA Northeastern Section Student Travel Grant |
| 2010 – 2011 | First Year Graduate Fellowship, Brown University |
| 2008 – 2009 | J. P. Bickell Foundation Mining Scholarship, Queen's University |
| 2008 – 2009 | Gartner Lee Scholarship in Geological Engineering, Queen's University |
| 2007 – 2008 | J. J. Denny Memorial Scholarship in Geological Engineering, Queen's University |
| 2006 – 2008 | Morley E. Wilson Scholarship in Geological Sciences, Queen's University |

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| 2006 – 2007 | Annie Bentley Lillie Book Prize for First Year Calculus, Queen's University |
| 2005 – 2008 | Dean's Scholar, Queen's University |
| 2005 – 2006 | Dean's Award, Queen's University |
| 2005 – 2006 | Dean's Entrance Scholarship in Applied Science, Queen's University |

First-Authored Conference Abstracts and Presentations (*past 2 years*)

**Oral presentation*

Goudge research group members: #Graduate student, †postdoctoral fellow, §undergraduate student.

1. ***Goudge, T. A.**, C. I. Fassett, and M. Coholich[§] (2020), Assessing the controls of overflow flood termination for Mars paleolakes, *2020 GSA Annual Meeting*, Abstract 184-2 (Invited).
2. **Goudge, T. A.**, D. Mohrig, B. T. Cardenas, C. M. Hughes, and C. I. Fassett (2019), Using Earth's sedimentary record to inform studies of delta channel deposits on Mars, *2019 SEPM Annual Meeting* (Invited).
3. **Goudge, T. A.**, C. I. Fassett, and G. R. Osinski (2019), How do crater lakes on Mars develop inlet valleys?, *50th Lunar and Planetary Science Conference*, Abstract 1223.

Co-Authored Conference Abstracts and Presentations (*past 2 years*)

Goudge research group members: #Graduate student, †postdoctoral fellow, §undergraduate student.

1. Hibbitts, C., T. Dong[†], **T. A. Goudge** (2020), Quantitative comparison between the probability distribution of channel belt properties on Earth and Mars, *2020 GSA Annual Meeting*, Abstract 195-6.
2. †Stucky de Quay, G., **T. A. Goudge**, and C. I. Fassett (2020), Martian paleolake morphologies as a record of ancient precipitation and aridity regimes, *2020 GSA Annual Meeting*, Abstract 249-3.
3. #Tebolt, M. A., and **T. A. Goudge** (2020), The geometry of the Tyras Vallis fan: Using stratigraphy to study depositional environment, *51st Lunar and Planetary Science Conference*, Abstract 1606. [*Conference cancelled*]
4. †Stucky de Quay, G., **T. A. Goudge**, and C. I. Fassett (2020), Precipitation and aridity constraints on early Mars from globally distributed paleolakes, *51st Lunar and Planetary Science Conference*, Abstract 1410. [*Conference cancelled*]
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18. Svensson, M. J. O., G. R. Osinski, F. J. Longstaffe, and **T. A. Goudge** (2019), Formation of secondary clay minerals in post-impact lacustrine rocks at the Ries impact structure, Germany, *50th Lunar and Planetary Science Conference*, Abstract 2494.
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and termination points on Mars: Elevation, slope, and thermal inertia distinguish RSL-forming site, *2018 AGU Fall Meeting*, Abstract P53F-3023.

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Field Experience

2013 – Present Rio Grande River, TX; Ghost Ranch, NM; Texas Gulf Coast; Coos Bay, OR; Trinity River, TX; Green River, UT; Wax Lake Delta, LA; North Loup River, NE; Meriden, CT; Bavaria, Germany

Professional Associations

2012 – Present Geological Society of America (GSA)
2011 – Present American Geophysical Union (AGU)
2011 – Present Geological Association of Canada (GAC)