

# Nick Wagner

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## Education

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### Ph.D. 2019-Present

Dissertation: Deformation of the Martian Lithosphere Through Time

**Baylor University**

Advisor: Dr. Peter James

### B.Sc. 2019

Major: Geophysics

Minor: Computer Science Specializing in Data Science

**Colorado School of Mines**

## Research Experience

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**2023**

*Telecomms Chair, Gravity Science Lead*

**NASA/JPL Planetary Science Summer School**

*New Frontiers Class Titan Orbiter Concept*

**2022**

*Student Observer of STM25*

**InSight**

*InSightSeer Program*

**2021**

*Study Participant*

**Keck Institute for Space Studies Workshop**

*Next-Generation Planetary Geodesy*

**2021**

*Research Intern*

**NASA/JPL**

*Advisor: Dr. Ryan Park*

**2019**

*Student Contractor*

**United States Geological Survey**

**2018**

*Research Intern*

**Lunar and Planetary Institute**

*Advisor: Dr. Jon Kay & Dr. Paul Schenk*

**2018 - 2019**

*Undergraduate Research Fellow*

**Colorado School of Mines**

*Advisor: Dr. Jeffery Shragge*

## Publications

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### In Prep

**Wagner, N.** & James, P. Unloading the Gravity and Topographic Signature of Tharsis.

### In Review

Seltzer, C., Bott, K., Brouwer, G., Burt, D., Gentgen, C., Lien, R., Abbate, J., Head, T., Hill, J., Gandarillas, V., Green, A., Larson, J., Montiel, N., Moreno, R., Mullikin, E., Radzom, B., **Wagner, N.**, Wijesekara, P., Nash, A., Keane, J. THUNDER: A Titan Orbiter New Frontiers Mission Concept *Planetary Science Journal*

### 2024

**Wagner, N.**, James, P., Ermakov, A., Sori, M. Evaluating the Use of Seasonal Surface Displacements and Time-Variable Gravity to Constrain the Interior of Mars. *Journal of Geophysical Research: Planets*. <https://doi.org/10.1029/2023JE008053>

### 2022

Xiao, H., Stark, A., Schmidt, F., Hao, J., Steinbrgge, G., **Wagner, N.**, Su, S., Cheng, Y., Oberst, J. Spatio-temporal level variations of the Martian Seasonal North Polar Cap from co-registration of MOLA profiles. *Journal of Geophysical Research: Planets*. <https://doi.org/10.1029/2021JE007158>

## Awards and Fellowships

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**Graduate School Travel Award**

*Yearly from 2020 to Present*

**Baylor Graduate School**

**Outstanding Teaching Assistant**

*2022*

**Baylor Geosciences Department**

**Texas Space Grant Fellow**

*2020*

**Texas Space Grant Consortium**

**Graduate School Fellow**

*2019-Present*

**Baylor Graduate School Fellowship**

## Work Experience

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**2019 - Present**

*Teaching Assistant*

**Baylor University**

GEO1401: Earthquakes and Natural Hazards

GEO3319: Intro to Geophysics

GEO5328: Geodynamics

**2019**

*Teaching Assistant*

**Colorado School of Mines**

GPGN268: Geophysical Data Analysis

**2018 - 2019**

*Data Processing Technician*

**EDCON-PRJ**

## Conference Abstracts (\* indicates presenting author)

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**2023**

**Wagner, N.\***, James, P., Ermakov, A., Sori, M. *New Estimates of Seasonal Surface Displacements and Time Variable Gravity on Mars* (LPSC)

North, A.\*, James, P., **Wagner, N.**, Moriarty, D. *Gravity Constraints on Bulk Density and Igneous Intrusion at Gruithuisen Domes* (LPSC)

Moriarty, D.\*, James, P., North, A., **Wagner, N.** *Evidence for Widespread Silicic Lithologies Across the Gruithuisen-Mairan Region* (LPSC)

Morris, J., Schurmeier, L.\*, **Wagner, N.**, Baker, S., Bill, C., Mohanna, S., Roth, N., Sanderson, H., Sridhar, S., Woodley, S., Daubar, I., Fernando, B., Newman, C., Panning, M. *InSightSeers: Peering into Invited Student Participation of a Mission Science Team Meeting* (LPSC)

**2022**

**Wagner, N.\***, James, P., Ermakov, A., Sori, M. *Quantifying Lithospheric Deflection Caused by Seasonal Mass Transport from the Polar Layered Deposits on Mars* (LPSC)

**Wagner, N.\***, Park, R., James, P. *A Geophysical Investigation of the Compensation State of Hellas Planitia* (LPSC)

Sori, M.\*, Bramson, A., Byrne, S., James, P., Ojha, L., **Wagner, N.** *Gravity Science Constrains the Presence and Volume of Mid-Latitude Ice Sheets on Mars* (LPSC)

Keane, J.\*, Sori, M., Ermakov, A., Austin, A., Bapst, J., Berne, A., Bierson, C., Bills, B., Boening, C., Bramson, A., D'Amico, S., Denton, A., Evans, A., Hemingway, D., Hernandez, S., Hogstrom,

K., Izquierdo, K., James, P., Johnson, B., Kahre, M., Lau, H., Navarro, T., Neveu, M., Nimmo, F., O'Rourke, J., Ojha, L., Paik, H.J., Park, R., Rosen, P., Simons, M., Smith, D., Smrekar, S., Soderlund, K., Steinbrgge, G., Tikoo, S., Vance, S., **Wagner, N.**, Weber, R., Zebker, H., Zuber, M. *Next-Generation Planetary Geodesy: Results from the 2021 Keck Institute for Space Studies Workshops* (LPSC)

Sori, M. M.\*, Ermakov, A. I., Keane, J. T., Bierson, C. J., Bills, B. G., Bramson, A. M., D'Amico, S., Evans, A. J., Hemingway, D. J., Izquierdo, K., James, P. B., Johnson, B. C., Kahre, M. A., Navarro, T., O'Rourke, J. G., Ojha, L., Paik, H. J., Park, R. S., Simons, M., Smith, D. E., Smrekar, S. E., Soderlund, K. M., Steinbrgge, G., Tikoo, S. M., Vance, S. D., **Wagner, N. L.**, Weber, R. C., Zebker, H. A. *Next-Generation Planetary Geodesy: Results from the 2021 Keck Institute for Space Studies Workshops* (Low-Cost Science Mission Concepts for Mars Exploration)

### **2021**

**Wagner, N.\***, James, P. *Evaluating Magma Ascent at Pavonis Mons, Mars Using Stress from Flexure* (LPSC)

### **2019**

**Wagner, N.\***, Kay, J., Schenk, P. The Orientation of the Bladed Terrain Feature in Tarturus Dorsa, Pluto and Possible Reorientation of Pluto (LPSC)

### **2018**

**Wagner, N.\***, Kay, J., Schenk, P. Study of the Orientation of the Bladed Terrain Feature in Tartarus Dorsa, Pluto (AGU)

## **Mentorship**

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**Allie North**

*Gravity survey of silicic volcanism on the Moon*

**Baylor Undergraduate**

*2022-Present*

**Skylar Hoover**

*Magnetotelluric survey of Kentland Crater, Indiana*

**Baylor Undergraduate**

*2022-2023*

## **Outreach**

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**Total Solar Eclipse**

*Mars: Dead or alive?*

**April 8th, 2024**

*Baylor University*

## **Scientific Service**

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**2021-2024**

*Executive Secretary*

**NASA Grant Review Panels**

*DALI, RIA, MDAP*

**2022-2023**

*Journal Reviewer*

**AGU: JGR-Planets**

**2023**

*Journal Reviewer*

**Elsevier: Icarus**