

# Ian Pamerleau

## Contact Information

---

Purdue University  
Earth, Atmospheric, and Planetary Science  
550 Stadium Mall Drive, West Lafayette, IN 47907

724-594-6975  
ipamerle@purdue.edu  
<https://ianpamerleau.github.io/>

## Research Interests

---

Icy Body Geophysics, Numerical Modeling, Fluid Flow

## Education

---

2021–Present	Ph.D.	Purdue University, Planetary Science Advisor: Michael Sori
2021	B.S.	University of Pittsburgh, Mathematics
2021	B.S.	University of Pittsburgh, Geology

## Professional Experience

---

2021–Present	Graduate Research Assistant, Purdue University
2019–2021	Research Assistant, University of Pittsburgh (Advisor: Eitan Shelef)
2019	Research Assistant, University of Pittsburgh (Advisor: Ming Chen)

## Awards & Honors

---

2024	Purdue Graduate Student EXPO Award: Outstanding Poster
2022	NSF Graduate Research Fellowship Program Honorable Mention
2022	Purdue Donald W. Levandowski Memorial Scholarship in Geology
2021–2022	Purdue Ross Fellowship
2021	University of Pittsburgh Flint Memorial Field Geology Award
2020	University of Pittsburgh Brackenridge Research Fellowship
2020	University of Pittsburgh Samuel B. Frazier Student Resources Fund
2019	NASA Pennsylvania Space Grant Consortium Scholarship

## Teaching Experience

---

2024	Teaching Assistant & Guest Lecturer, Purdue University, EAPS 556, Planetary Surface Processes
------	--

2024	Teaching Assistant, Purdue University, EAPS 507, Introduction to Analysis and Computing with Geoscience Data
2023	Guest Lecturer, Purdue University, EAPS 354, Earth and Planetary Geophysics
2020	Math Assistance Center Tutor, University of Pittsburgh, General University Level Math Including Calculus and Analysis

## Publications

---

**Pamerleau, I. F.**, Sori, M. M., Scully, J. E. C. (2024), An ancient and impure frozen ocean on Ceres implied by its ice-rich crust, *Nature Astronomy*, in press.

## Conference Abstracts

---

**Pamerleau, I. F.**, Sori, M. M., Scully, J. E. C. (2024), Asymmetric Relaxation of Large Craters in an Ice-Rich Crust are Consistent with Dawn Observations of Ceres, *LPSC 55<sup>th</sup>*, 1263.

Blanco-Rojas, M.G, Sori, M. M., and **Pamerleau, I. F.** (2024), Oberon as an ocean world? Insights from the topography of one of the tallest peaks in the Solar System, *LPSC 55<sup>th</sup>*, 1468.

Sori, M. M. and **Pamerleau, I. F.** (2023), Thermal history of Uranian moons and their oceans from topography: Constraints from Voyager 2 and prospects for a Uranian orbiter, *Uranus flagship: Investigations and instruments for a cross-discipline science workshop*, 8072.

**Pamerleau, I. F.**, Sori, M. M., Scully, J. E. C. (2023), An ice-rich crust with unrelaxed craters on Ceres reflects an ancient frozen ocean, *LPSC 54<sup>th</sup>*, 1359.

**Pamerleau, I. F.**, Sori, M. M., Johnson, B. C. (2023), Convection in Callisto's Ice Shell: Implications for Differentiation, *LPSC 54<sup>th</sup>*, 1647.

Kring, D., Bamber, E., Blance, A., Brezfelder, J., Faucher, J., Flom, A., Lehman Franco, K., Harris, E., Jhoti, E., Laferriere, K. L., Martin, A., Meyer, M., **Pamerleau, I. F.**, Plan, A., Roberts, E., Shubham, S., Slumba, K., Zimmermann, N., Barrett, T., (2023) Cascading Boulder and Boulder Track Experiment at Barringer Meteorite Crater (AKA Meteor Crater), Arizona, *LPSC, 54<sup>th</sup>*, 2186.

**Pamerleau, I. F.**, Sori, M. M., Scully, J. E. C. (2022), Insolation-Driven Topographic Evolution on Ceres, *LPSC, 53<sup>rd</sup>*, 1711.

**Pamerleau, I. F.**, Reid, M., Shelef, E., Rowland, J. C., Schwenk, J., Mishra, U. (2020), Automated Mapping of Arctic Floodplains to Improve Estimates of Sediment and Carbon Fluxes, *AGU Fall Meeting*, # H137-0002.

## Leadership Experience

---

2021–Present	Purdue Graduate Student Association
2018–2021	University of Pittsburgh Society of Physics Students
2018–2021	University of Pittsburgh Jazz Ensemble
2018–2019	University of Pittsburgh Fencing Team

## Skills

---

COMSOL (Structural Mechanics & Nonlinear Materials)  
JMARS & GIS  
MATLAB (Topotoolbox, Mapping Toolbox)

## References

---

### **Professor Michael Sori**

Purdue University, Department of Earth, Atmospheric, and Planetary Sciences  
HAMP 2277, 550 Stadium Mall Drive, West Lafayette, IN 47907  
msori@purdue.edu

### **Professor Brandon Johnson**

Purdue University, Department of Earth, Atmospheric, and Planetary Sciences;  
Department of Physics and Astronomy  
HAMP 3227, 550 Stadium Mall Drive, West Lafayette, IN 47907  
bcjohnson@purdue.edu

### **Professor Eitan Shelef**

University of Pittsburgh, Department of Geology and Environmental Science  
310 SRCC, 4107 O'Hara Street, Pittsburgh, PA 15260  
shelef@pitt.edu