



Research Field: PLANETARY GEOLOGY

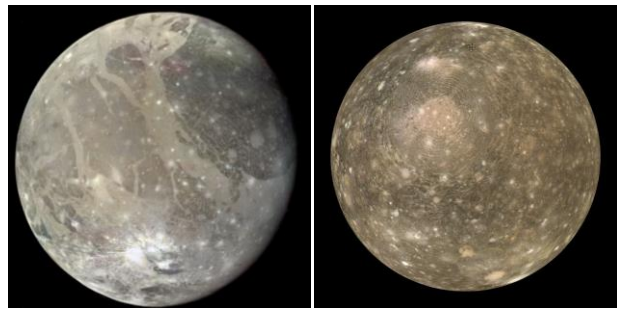
Focused Field: IMPACT CRATERING & IMPACTOR SOURCES

SHORT BIO

I'm currently an Assistant Professor in State Key Laboratory of Lunar and Planetary Sciences, Macau University of Science and Technology. I got my B.E. in Surveying and Mapping Engineering and master's degree in Planetary Geodesy from Wuhan University in 2011 and 2014, respectively, and got my Ph.D. in Planetary Geology from the University of Tokyo in 2017. My current research fields are impact processes on the Moon and Galilean satellites (especially Ganymede and Callisto). I've published over 10 papers in professional journals, including *Nature Astronomy*, *Nature Communication*, *Astronomy & Astrophysics*, *Geophysical Research Letters*, etc.

Assistant Prof. XU LUYUAN

Ph.D: Planetary Geology – The University of Tokyo
 Master: Planetary Geodesy – Wuhan University
 Bachelor: Surveying and Mapping Engineering – Wuhan University



Jovian satellites: Ganymede and Callisto

PUBLICATIONS ()

Xu, L., Qiao, L., Xie, M., et al. (2022). Formation age of lunar Lalande crater and its implications for the source region of the KREEP-rich meteorite Sayh al Uhaymir 169. *Earth and Planetary Science Letters*, 478, 115166.

Yang, K., Feng, W., **Xu, L.**, et al. (2022). Review of research on lunar dust dynamics. *Journal of Geophysical Research*, 127(7), 1-12.

Xu, L., Qiao, L. (2022). Formation age of the Rima Sharp sinuous rill on the Moon, source of the returned Chang'e-5 samples. *Journal of Geophysical Research*, 127, 657.

Qiao, L., **Xu, L.**, Yang Y., et al. (2021). Cratering Records in the Chang'e-5 Mare Unit: Filling the "Age Gap" of Lunar Crater Chronology and Preparation for its Re-calibration. *Journal of Geophysical Research*, 126, 48, e2021GL095132. (**cover paper**)

Xu, L., Qiao, L. (2021). *Journal of Geophysical Research*, 126, 95(9).

Qiao, L., Chen, J., **Xu, L.**, et al. (2021). Geology of the Chang'e-5 landing site: Constraints on the sources of samples returned from a young nearside mare. *Journal of Geophysical Research*, 126, 364, 114480.

Xu, L., Zhang, X., Qiao, L., & Lai, J. (2021). Evaluating the Thickness and Stratigraphy of Ejecta Materials at the Chang'e-4 Landing Site. *Journal of Geophysical Research*, 126(1), 29.

Xie, M., Xiao, Z., **Xu, L.**, et al. (2021). Change in the Earth–Moon impactor population at about 3.5 billion years ago. *Journal of Geophysical Research*, 126(2), 128-133.

Xu, L., Xie, M., (2020). Ejecta Thickness Distribution of Lunar Schrödinger Basin. *Journal of Geophysical Research*, 125(12).

Lai, J., Xu, Y., Bugiolacchi, R., ..., **Xu, L.** (2020). First look by the Yutu-2 rover at the deep subsurface structure at the lunar farside. *Journal of Geophysical Research*, 125(1), 1-9.

Xu, L., Hirata, N. & Miyamoto, H. (2019). Spatial distribution of ray craters on Callisto: Implications for ray retention and impactor sources on Jovian satellites. *Journal of Geophysical Research*, 124(7), 1717-1727

Xu, L., Hirata, N. & Miyamoto, H. (2017). Ray craters on Ganymede: Implications for cratering apex-antapex asymmetry and surface modification processes. *Icarus*, 295, 140-148.

Li, F., Yan, J., **Xu, L.**, et al. (2015). A 10 km-resolution synthetic Venus gravity field model based on topography. *Journal of Geophysical Research*, 120, 247, 103-111.

Yan, J., **Xu, L.**, Li, F., et al. (2015). Lunar core structure investigation: Implication of GRAIL gravity field model. *Journal of Geophysical Research*, 120(6), 1721-1727.

PROFESSIONAL EXPERIENCE

2022.10 – current: Assistant Professor, SKLplanets, Macau University of Science and Technology
 2017.11 – 2022.10: Post-doctoral, SKLplanets, Macau University of Science and Technology

GRANTS

2018-2021 Scientific Analysis of Chang'E-4 Lunar Exploration Data, The Science and Technology Development Fund (FDCT), Sub-project Co-investigators

2018-2019

2014-2017 外 上 (41374024)

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2012-2015 外 (4117419)

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