



# Research Field: PLANETARY GEOLOGY

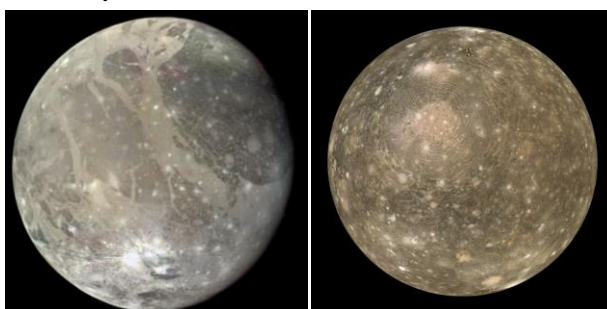
## Focused Field: IMPACT CRATERING & IMPACTOR SOURCES

### 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 ( *ch ch ch* )

**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. *G* , 115166.

Yang, K., Feng, W., **Xu, L.**, et al. (2022). Review of research on lunar dust dynamics. *m ch ch ch* 367(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. *m m m* , 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. *ch m ch ch ch ch* , 48, e2021GL095132. (**cover paper**)

. (2021). 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. *G* , 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. *ch m m m* , 162(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. *ch m m* , 5(2), 128-133.

**Xu, L.**, Xie, M., (2020). Ejecta Thickness Distribution of Lunar Schrödinger Basin. *m m ch ch ch ch* , 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. *ch m m* , 11 (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. *m m ch m ch ch ch* , 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. *G* , 247, 103-111.

Yan, J., **Xu, L.**, Li, F., et al. (2015). Lunar core structure investigation: Implication of GRAIL gravity field model. *ch ch ch ch* , 55(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 (41374024)

2012-2015 (4117419)