

TIANTIAN LIU

Institute of Geodesy and Geoinformation Science
Technische Universität Berlin
Straße des 17. Juni 135 (H12), 10623 Berlin, Germany

Office: Room H 6165
Telephone: +49 15234059538
Email: tiantian.liu@tu-berlin.de

Academic Curriculum Vitae

Effective 31. 03. 2019

Education

11.2016 – present (supervisors: Dr. Greg Michael and Prof. Jürgen Oberst)
PhD candidate, Earth Science, Technische Universität Berlin, Germany

09.2013 – 07.2016 (supervisor: Dr. Wenzhe Fa)
Master of Engineering, Photogrammetry and Remote Sensing, Peking University, China

09.2009 – 06.2013 (supervisor: Prof. Dongping Ming)
Bachelor of Science, Geographic Information System, China University of Geosciences (Beijing),
China

Skills

Geophysics (numerical modeling, impact cratering process), Remote Sensing (estimation of lunar regolith thickness, crater morphology, multiband image classification), GIS (secondary development of software), Geodesy (image registration)

Area of Interests

Bombardment history; Lunar chronology system; Surface age dating; Impact cratering process; Crater morphology; Choice of sampling/landing sites; Thickness estimation of lunar regolith

Participated Grants

German Research Foundation (DFG) SFB TRR-170-1 TP A4 (<https://www.trr170-lateaccretion.de/>)
National Natural Science Foundation of China (11203002)
Key Research Program of the Chinese Academy of Sciences (KGZD-EW-603)
Science and Technology Development Fund of Macau (019/2010/A2; 004/2011/A1; 048/2012/A2)

International conferences

03. 2019, **LPSC**, Texas, USA, oral presentation
12. 2018, **AGU Fall meeting**, Washington D.C., USA, oral presentation
09. 2018, **EPSC**, Berlin, Germany, oral presentation
07. 2018, **CNSA-ESA Workshop**, Amsterdam, Netherlands, oral presentation
05. 2018, **European Luna Symposium (ELS)**, Toulouse, France, oral presentation & poster
10. 2017, **Paneth Colloquium**, Nördlingen, Germany, oral presentation
09. 2017, **EPSC**, Riga, Latvia, oral presentation
05. 2017, **ELS**, Münster, Germany, oral presentation
03. 2015, **LPSC**, Texas, USA, poster

Publications

1. **Tiantian Liu**, Greg Michael, Kai Wünnemann, Harry Becker and Jürgen Oberst. Lunar megaregolith mixing by impacts: spatial diffusion of basin melt and its implications for future sampling. *EPSL* (under review).
2. **Tiantian Liu**, Greg Michael, Juliane Engelmann, Kai Wünnemann, and Jürgen Oberst. Regolith mixing by impacts: Lateral diffusion of basin melt (2018). *Icarus*, 321, 691–704. <http://dx.doi.org/10.1016/j.icarus.2018.12.026>.
3. Wenzhe Fa, Meng-ua Zhu, **Tiantian Liu**, and Jeffrey B. Plescia (2015). Regolith stratigraphy at the Chang'E-3 landing site as seen by lunar penetrating radar. *Geophysical Research Letters*. <http://dx.doi.org/10.1002/2015GL066537>.
4. Wenzhe Fa, **Tiantian Liu**, Meng-Hua Zhu, and Junichi Haruyama (2014). Regolith thickness over Sinus Iridum: Results from morphology and size-frequency distribution of small impact craters. *Journal of Geophysical Research: Planets*, 119, 1914–1935. <http://dx.doi.org/10.1002/2013JE004604>.
5. Meng-Hua Zhu, Wenzhe Fa, Wing-Huen Ip, Jiangchuan Huang, **Tiantian Liu**, Linzhi Meng, Jun Yan, Aao Xu, Zesheng Tang, Xiaolei Wang, and Dong Qiao (2014). Morphology of asteroid (4179) Toutatis as imaged by Chang'E-2 spacecraft. *Geophysical Research Letters*, 41, 328–333. <http://dx.doi.org/10.1002/2013GL058914>.
6. Dongping Ming, Jinyang Du, Xiyu Zhang, **Tiantian Liu** (2013). Modified average local variance for pixel-level scale selection of multiband remote sensing images and its scale effect on image classification accuracy, *Journal of Applied Remote Sensing*, 7(1), 073565. <http://dx.doi.org/10.1117/1.JRS.7.073565>.
7. **Tiantian Liu**, Greg Michael, Kai Wünnemann and Jürgen Oberst (2018), Regolith Mixing by Impacts: Lateral Diffusion of Basin Melt, *AGU Fall meeting*, 2018.
8. **Tiantian Liu**, Greg. G. Michael, Juliane Engelmann, Kai Wünnemann and Jürgen Oberst (2018). Regolith Mixing by Impacts: Lateral Diffusion of Basin Melt. *European Planetary Science Congress* 2018.
9. **Tiantian Liu**, Greg. G. Michael and Jürgen Oberst (2018). Regolith Mixing by Impacts: Lateral Diffusion of Basin Melt. *European Lunar Symposium* 2018.
10. **Tiantian Liu**, Greg. G. Michael and Jürgen Oberst (2017). 2D models for the evolving distribution of impact melt at the lunar near-surface. *European Planetary Science Congress* 2017.
11. **Tiantian Liu**, Greg. G. Michael and Jürgen Oberst (2017). 2D models for the evolving distribution of impact melt at the lunar near-surface. *European Lunar Symposium* 2017.
12. **Tiantian Liu**, Wenzhe Fa, and Meng-Hua Zhu (2015). Rules for regolith thickness estimation using crater morphology and its application to Oceanus Procellarum, *46th Lunar and Planetary Science Conference*, Abstract 1253.
13. **Tiantian Liu**, Wenzhe Fa, Menghua Zhu, and Junichi Haruyama (2014). Regolith thickness estimation over Sinus Iridum using morphology and size-frequency distribution of small craters from LROC images. *45th Lunar and Planetary Science Conference*, Abstract 1347.
14. **Tiantian Liu** and Wenzhe Fa (2013). Regolith thickness estimation over Sinus Iridum using morphology of small craters from LROC images. *European Planetary Science Congress*, Abstract 304.