

# CSILLA ORGEL

**address** Schwäbische Str. 27.  
10781 Berlin

**phone** 0049 151 2585.1492  
0049 30 838-61203

**e-mail** [orgel.csilla@fu-berlin.de](mailto:orgel.csilla@fu-berlin.de)

**currently at** Freie Universität Berlin (FUB)  
Planetary Sciences and  
Remote Sensing Group  
Department of Earth Sciences  
Malteserstr. 74-100, House D  
12249 Berlin, Germany

## CURRICULUM VITAE

Born: 1987

Nationality: Hungarian

Degree: M.Sc. Geological Sciences, 2016

From: Freie Universität Berlin, Germany

Languages: Hungarian (mother tongue), English, German, French

## EXPERIENCE SUMMARY

As a planetary geologist, I am focusing on the inner Solar System bodies, including Mars, Moon, and Mercury. I am a remote sensing expert and use data from several orbiters: Mars Reconnaissance Orbiter, Mars Express, Mars Global Surveyor, Lunar Reconnaissance Orbiter, Kaguya, Chandrayaan, and MESSENGER as well as analyze those data in Geographic Information System (e.g. ArcGIS). In the beginning of my carrier, I have studied the Late-Amazonian history of Mars including periglacial and glacial landforms in the eastern Hellas Basin, Phlegra Montes, and the northern lowlands (Acidalia, Utopia, Arcadia Planitiae). Moreover, I have worked on Noachian/Hesperian subsurface sediment mobilization features in the northern lowlands of Mars. My Ph.D. focuses on the early Solar System formation by studying the stratigraphic relationship and crater densities of large impact basins on the Moon and Mercury and address questions related to lunar chronology. Additionally, I have worked for several years on Mars/Moon analog exploration missions as an analog astronaut, trainer and remote science expert from Mission Control Center (Austrian Space Forum). Finally, I have studied landing sites for ISECG-GER humans mission scenario, Chang'e-4 and ExoMars rovers.

## EDUCATION

- 2016 – now **Freie Universität Berlin**, Planetary Sciences and Remote Sensing Group, Berlin, Germany
- 2015 – 2016 **Freie Universität Berlin**, Planetary Sciences and Remote Sensing Group, Berlin, Germany  
M.Sc. Geological Sciences (Planetary Sciences)
- 2013 **Freie Universität Berlin**  
ERASMUS Scholarship (1 semester)
- 2011 – 2012 **Eötvös Lorand University**, Budapest, Hungary  
M.Sc. of Geology (3 semesters)
- 2007 – 2011 **Eötvös Lorand University**, Budapest, Hungary  
B.Sc. of Earth Sciences (specialized in Geology)
- 2002 – 2007 **Munkacsy Mihaly High School**, Kaposvar, Hungary  
French – Hungarian Bilingual Class

## PROFESSIONAL EMPLOYEMENT AND INTERNSHIPS

- 2018 **NASA Marshall Space Flight Center**  
Position: Visiting Scientist  
Project: Re-examination of the population, stratigraphy, and sequence of Mercurian basins: Implications for Mercury's early impact history and comparison with the Moon.  
Experiences: geological mapping, crater-based age dating, crater statistics  
Duration: 9 weeks  
Supervisor: Dr. Caleb Fassett
- 2017 **Westfälische Wilhelms-Universität Münster**, Planetary Sciences Group  
Position: Visiting Scientist  
Project: Characterization of high-priority landing sites for the Chang'e-4 exploration mission in the Apollo basin, Moon.  
Experiences: geological mapping, crater-based age dating, landing site analysis, thermophysical properties of regolith, mineralogy  
Duration: 1 month  
Supervisor: Prof. Dr. Harald Hiesinger, Dr. Mikhail Ivanov, Dr. Carolyn van der Bogert
- 2016 – now **Freie Universität Berlin**  
Planetary Sciences and Remote Sensing Group  
Institute of Geological Sciences, Berlin, Germany  
Position: Research Assistant/Ph.D student, Student Representative (since 2017)  
Project: Late Accretion onto Terrestrial Planets, TRR-170-A3/German Research Foundation  
Experiences: geological mapping, crater-based age dating, quantitative methods  
Supervisor: Dr. Greg Michael, Prof. Dr. Harry Becker, Prof. Dr. Harry Hiesinger, Dr. Carolyn van der Bogert

- 2016 **Lunar and Planetary Institute/Universities Space Research Association**  
 CLSE 2016 Exploration Science Summer Intern Program  
 Project: Traverse Design for Phase 2 of eDSH Enabled Lunar Missions Being Examined as an ISECG GER Mission Scenario  
 Experiences: landing site study, human and robotic exploration  
 Duration: 10 weeks  
 Supervisor: Dr. David Kring
- 2014 – 2015 **Deutsches Zentrum für Luft und Raumfahrt (DLR), ERASMUS Training Program**  
 Institut für Planetenforschung, Berlin, Germany  
 Position: Intern  
 Project 1: Mapping the northern plains of Mars: origins, evolution and response to climate change (International Space Science Institute, Switzerland)  
 Project 2: Evolution of mud volcanoes, thumbprint terrain and giant polygons in the northern lowlands of Mars: Case Study from the Acidalia Planitia  
 Experiences: grid-mapping, spatial analysis  
 Supervisor: Ernst Hauber
- 2014 **Alpbach Summer School**  
 Alpbach, Austria  
 Topic: Geophysics of Terrestrial Planets  
 Project work: Geophysical mission to Venus  
 Experiences: mission planning, planetary geology – and geophysics
- 2014 – 2016 **Freie Universität Berlin**  
 Planetary Sciences and Remote Sensing Group  
 Institute of Geological Sciences, Berlin, Germany  
 Position: Intern  
 Project: Periglacial evolution of debris aprons at the mid-latitudes on Mars  
 Experiences: geological mapping, crater-based age dating, quantitative methods  
 Supervisor: Prof. Dr. Stephan van Gasselt
- 2013 **Hungarian Academy of Sciences**  
 Research Centre for Astronomy and Earth Sciences, Budapest, Hungary  
 Position: Student Intern  
 Project: Geochemical analysis of the NWA 4964 meteorite.  
 Experiences: Raman Spectroscopy, SEM, Cathode Luminescence, XRD  
 Duration: 2 months  
 Supervisor: Dr. Akos Kereszturi
- 2010 – 2013 **Austrian Space Forum**  
 PolAres Project, Innsbruck, Austria  
 Position: Volunteer  
 Experiences: Human Exploration, Field trips, Analog-Astronaut Training, Mission Control Center, Flight Planning, Science Team work, Organization of the first and second Geoscience Workshops  
 Duration: 3 years  
 Project Lead: Dr. Gernot Grömer

## TRAINING AND FIELD WORK

- 2018 Origin of the Earth-Moon System, Summer School 2018 (short course)  
25 – 28 June, German Research Foundation (SFB TRR-170), Trechtingshausen, Germany
- 2017 Impact Processes in the Solar System, Summer School 2017 (short course)  
19 – 22 June, German Research Foundation (SFB TRR-170), Nördlingen, Germany
- 2016 Planetary Geodynamics, Winter School 2016 (short course)  
21 – 23 November, German Research Foundation (SFB TRR-170), Hodenhagen, Germany
- 2015 Mid- VIS/NIR Spectroscopy of Mars (short course)  
23 – 27 February, Freie Universität Berlin, Germany
- 2013 Impact geology field trip to Ries Crater, Germany  
27 – 29 September, Naturkunde Museum, Berlin, Germany
- 2013 Introductory and Advanced Impact Geology (short course)  
15 – 26 July, Naturkunde Museum, Berlin, Germany
- 2013 ILEWG EuroMoonMars project (Mars Desert Research Station)  
23 February – 09 March, Hanksville, Utah
- 2011 Radar Remote Sensing Course (short course)  
13 – 17 June, ESA/DLR/University of Szeged, Szeged, Hungary
- 2011 – 2012 Several Radio Magnetotelluric (RMT) and Vertical Electrical Sounding (VES) field trips  
Nagybörzsöny – Zebegeny, Tally – Golop – Abaujszanto, Balatonhenye, Hungary  
Geogold Karpatia Ltd.
- 2010 – 2013 Austrian Space Forum/PolAres project (Mars analog missions)
- Rio Tinto Mission 2011 (17 – 23 April, Rio Tinto Mine Area, Spain)
  - Dachstein Mars Simulation 2012 (27 April – 01 May, Giant Ice Cave, Dachstein, Austria)
  - Pre-MARS2013 Field Reconnaissance Mission (28 January–02 February, SE– Morocco)
  - MARS 2013 Mission (03 – 15 February, Erfoud, Morocco)
- Participation in Mission Control Center activities within the Science Team and Flight Control Team, Innsbruck, Austria
- 2009 Hungarian Dinosaur Research Expedition  
27 July – 16 August, Iharkut, Hungary
- 2007 – 2008 Several astronomical observations of asteroids  
Hungarian Academy of Sciences, Piszkestető Observatory
- 2006 NASA International Space Camp  
22 – 28 July, U.S. Space and Rocket Center, Huntsville, Alabama

## SUMMARY OF PROJECTS

2016 – now **Freie Universität Berlin:**

### **SFB-TRR-170/Late Accretion onto Terrestrial Planets**

*Project 1:* Ancient bombardment of the inner Solar System – Reinvestigation of the “fingerprints” of different impactor populations on the lunar surface

*Project 2:* Characterization of high-priority landing sites for the Chang’e-4 exploration mission in the Apollo basin, Moon.

*Project 3:* Re-examination of the population, stratigraphy, and sequence of Mercurian basins: Implications for Mercury’s early impact history and comparison with the Moon.

2018 – now **ESA ExoMars 2020**

*Project 1:* Analysis of Mawrth Vallis candidate landing site for ESA ExoMars 2020 rover

2016 **Lunar and Planetary Institute:**

*Project 1:* Traverse Design for Phase 2 of eDSH Enabled Lunar Missions Being Examined as an ISECG GER Mission Scenario

2014-2016 **Freie Universität Berlin:** Planetary Sciences and Remote Sensing Group

*Project 1:* Periglacial evolution of debris aprons at the mid-latitudes on Mars

2014-2015 **Deutsches Zentrum für Luft und Raumfahrt (DLR):**

*Project 1:* Mapping the northern plains of Mars: origins, evolution and response to climate change (International Space Science Institute, Switzerland)

*Project 2:* Evolution of mud volcanoes, thumbprint terrain and giant polygons in the northern lowlands of Mars: Case Study from the Acidalia Planitia

2013 **Hungarian Academy of Sciences:**

*Project 1:* Geochemical analysis of the NWA 4964 meteorite.

2013 **International Lunar Exploration Working Group (ILEWG)**

*Project 1:* EuroMoonMars Project (Mars Desert Research Station)

2010 – 2013 **Austrian Space Forum:** PolAres Project

*Project 1:* Rio Tinto Mission 2011

*Project 2:* Dachstein Mars Simulation 2012

*Project 3:* MARS 2013 Mission

*Project 4: Analog astronaut training workshops and field trips*

## PUBLIC OUTREACH AND EDUCATION ACTIVITIES

Writing for “Termesztet Világa”, Tetekas Nyuz (University Press), THE Magazin, THE Portal, Interpress Magazin, Index Portal (in Hungarian)

Talks at various, public platforms, such as Word Space Week, European Space Expo, Budapest Science Meetup, Eötvös Loránd University, Hungarian Astronomical Association, Hungarian Astronautical Society, THE Roadshow, Lange Nacht der Wissenschaften (in Hungarian, German or English)

## AWARDS

- 2014      **Student Travel Grant** (Deutsches Zentrum für Luft und Raumfahrt, DLR)  
Alpbach Summer School 2014, Austria
- 2014      **Erasmus Training Program Scholarship** (5 months)  
Internship at Deutsches Zentrum für Luft und Raumfahrt, Berlin, Germany
- 2013      **Award of the Association of Hungarian Women in Science**  
Category: Space Sciences
- 2013      **Erasmus Scholarship** (6 months)  
Freie Universität Berlin, Germany
- 2012      **Student Travel Grant** (European Space Agency, ESA)  
International Astronautical Congress (IAC), Naples, Italy
- 2011      **1<sup>st</sup> Prize in the National University Science Student Conference**  
Session: Geomorphology  
Nyiregyhaza, Hungary
- 2009      **1<sup>st</sup> Prize in the Regional University Student Conference**  
Session: Geomorphology  
Budapest, Hungary
- 2004 – 2007      **Numerous High School Awards** from the Hungarian Astronomical Association and the Hungarian Astronautical Society

## COMPUTER SKILLS

ArcGIS Software (with extensions, e.g. CraterTool, Polar Plot) – excellent  
Craterstats 2.0 – excellent  
MatLab – good (focus on thermodynamical problems)  
ENVI – fair

ISIS – Planetary Image Processing Software - good  
Adobe applications – good  
CorelDraw Graphic Suite – excellent

## PROFESSIONAL ASSOCIATIONS

2016 – now American Geophysical Union (AGU) (member)  
2012 – 2015 Hungarian Astronautical Society (board member)  
2010 – now Austrian Space Forum (member)  
2009 – 2010 ELTE, Student Union, Science Divison (member)  
2004 – 2007 Hungarian Astronomical Association/Local Group in Kaposvár (founder)  
2004 – now Hungarian Astronautical Society (member)  
2003 – 2008 Hungarian Astronomical Association (member)

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Planetary Sciences and  
Remote Sensing Group  
Department of Earth Sciences  
Malteserstr. 74-100, House D  
12249 Berlin, Germany

## BIBLIOGRAPHY

### PEER-REVIEWED PAPERS

17. **Orgel, C.**, Ivanov, M. A., Hiesinger, H., van der Bogert, C. H., Pasckert, J. H., Michael, G.: Potential landing sites for the Chang'e-4 exploration mission to the Apollo basin, Moon. (*in prep.*)
16. **Orgel, C.**, Fassett, C. I., Michael, G., van der Bogert, C. H., Hiesinger, H.: Re-examination of the population, stratigraphy, and sequence of Mercurian basins: Implications for Mercury's early impact history and comparison with the Moon. (*in prep.*)

### 2018

15. Ivanov, M. A., Hiesinger, H., van der Bogert, C. H., **Orgel, C.**, Paskert, J. H., Head, J. W. 2018: Geologic history of the northern portion of the South Pole-Aitken basin on the Moon. *Journal of Geophysical Research Planets*, <https://doi.org/10.1029/2018JE005590>
14. Allender, E. J., **Orgel, C.**, Almeida, N. V., Cook, J., Ende, J. J., Kamps, O., Mazrouei, S., Slezak, T. J., Soini, A.-J., Kring, D. A. 2018: Traverses for the ISECG-GER Design Reference Mission for Humans on the Lunar Surface. *Advances in Space Research*, <https://doi.org/10.1016/j.asr.2018.08.032>
13. Séjourné, A., Costard, F., Swirad, Z. M., Łosiak, A., Bouley, S., Smith, I., Balme, M. R., **Orgel, C.**, Ramsdale, J. D., Hauber, E., Conway, S. J., van Gasselt, S., Reiss, D., Johnsson, A., Gallagher, C., Skinner, J. A., Kereszturi, A., Platz T. 2018: Mapping the northern plains of Mars: using morphotype and distribution of ice-related landforms to understand multiple ice-rich deposits in Utopia Planitia. *Journal of Geophysical Research Planets*, <http://doi:10.1029/2018JE005665>
12. **Orgel, C.**, Hauber, E., van Gasselt, S., Reiss, D., Johnsson, A., Ramsdale, J. D., Smith, I., Swirad, Z. M., Wilson, J. T., Séjourné, A., Balme, M. R., Conway, S. J., Costard, F., Eke, V. R., Gallagher, C., Kereszturi, A., Łosiak, A., Massey, R. J., Platz, T., Skinner, J. A., Teodoro, L. F. A. 2018: Gridmapping



the Northern Plains of Mars: A New Overview of Recent Water- and Ice-Related Landforms in Acidalia Planitia. *Journal of Geophysical Research Planets*, <http://doi:10.1029/2018JE005664>

11. Ramsdale, J. D., Balme, M. R., Gallagher, C., Conway, S. J., Smith, I., Hauber, E., **Orgel, C.**, Séjourné, A., Costard, F., Eke, V. R., van Gasselt, S., Johnsson, A., Kereszturi, A., Łosiak, A., Massey, R. J., Platz, T., Reiss, D., Skinner, J. A., Swirad, Z. M., Teodoros, L. F. A., Wilson, J. T. 2018: Gridmapping the northern plains of Mars: Geomorphological, Radar and Water-Equivalent Hydrogen results from Arcadia Planitia suggest possible fluvial and volcanic systems overlain by a ubiquitous and heavily degraded ice-rich latitude-dependent mantle. *Journal of Geophysical Research Planets*, <http://doi:10.1029/2018JE005663>
10. De Toffoli, B., Pozzobon, R., Mazzarini, F., **Orgel, C.**, Massironi, M., Giacomini, L., Mangold, N., Cremonese, G. 2018: Estimate of depths of source fluids related to mound fields on Mars. *Planetary and Space Science*, <https://doi.org/10.1016/j.pss.2018.07.005>
09. Riedel, C., Michael, G., Kneissl, T., **Orgel, C.**, Hiesinger, H., van der Bogert, C. H. 2018: A New Tool to Account for Crater Obliteration Effects in Crater Size-Frequency Distribution Measurements. *Earth and Space Science*, 5, 258-267, <https://doi.org/10.1002/2018EA000383>
08. **Orgel, C.**, Michael, G., Fassett, C. I., van der Bogert, C. H., Riedel, C., Kneissl, T., Hiesinger, H. 2018: Ancient bombardment of the inner Solar System – Reinvestigation of the “fingerprints” of different impactor populations on the lunar surface. – *Journal of Geophysical Research*, Vol. 123, Issue 3, 748–762, <http://doi.org/10.1002/2017JE005451>

## 2017

07. Ramsdale, J. D., Balme, M. R., Conway, S. J., Gallagher, C., van Gasselt, S., Hauber, E., **Orgel, C.**, Sejourne, A., Skinner, J. A., Jr., Costard, F., Johnsson, A., Łosiak, A., Reiss, D., Swirad, Z., Kereszturi, A., Smith, I., Platz, T. 2017: Grid-based mapping: a method for rapidly determining the spatial distributions of small features over very large areas. – *Planetary and Space Science* 140, 49-61.

## 2016

06. Cross, M., Battler, M., Maiwald, V., van't Woud, H., Ono, A., Schlacht, I., L., **Orgel, C.**, Foing, B., McIsaac, K. 2016: Operational Lessons Learnt from the 2013 ILEWG EuroMoonMars-B Analogue Campaign for Future Habitat Operations on Moon and Mars. – *Acta Futura* 10, 61 – 73.

## 2014

05. Łosiak, A., Gołębiowska, I., **Orgel, C.**, Moser, L., MacArthur, J., Boyd, A., Hettrich, S., Wittek, S., Jones, N., Groemer, G. 2014: Remote Science Support during MARS2013: testing a map-based system of data processing and utilization for the future long-duration planetary missions. – *Astrobiology Journal* Vol.14 (5): 417 – 430, <http://doi:10.1089/ast.2013.1071>
04. Groemer, G. E., Soucek, A., Frischauf, N., Stumptner, W., Ragonig, C., Sams, S., Bartenstein, T., Haeuplik-Meusburger, S., Petrova, P., Evetts, S., Sivenesan C. and the **MARS2013 Team** 2014: The MARS2013 Mars Analog Mission. – *Astrobiology Journal* Vol.14 (5): 360 – 376.

03. Groemer, G. E., Foresta, L., Turetschek, T. and the **MARS2013 Team** 2014: A case for using ground-based thermal inertia measurements to detect Martian caves. – *Astrobiology Journal* Vol.14 (5): 431 – 437.
02. Groemer, G. E., Sattler, B., Weisleitner, K., Hunger, L., Kohstall, C., Frisch, A., Jozefowicz, M., Meszynski, S., Storrie-Lombardi, M. and the **MARS2013 Team** 2014: Field trial of a Dual-Wavelength Fluorescent Emission (L.I.F.E) instrument and the Magma White rover during the MARS2013 Mars Analog Mission. – *Astrobiology Journal* Vol.14 (5): 391 – 405.
01. **Orgel, C.**, Kereszturi, A., Vácz, T., Groemer, G., Sattler, B. 2014: Scientific Results and Lessons Learned from an Integrated Crewed Mars Exploration Simulation at the Rio Tinto Mars Analogue Site. *Acta Astronautica* 94/2 (2014), 736-748. <http://doi:10.1016/j.actaastro.2013.09.014>

## ABSTRACTS

46. **Orgel, C.**, Fassett, C. I., Michael, G., van der Bogert, C. H., Hiesinger, H. 2018: Re-examination of the population, stratigraphy, and sequence of Mercurian basins: Implications for Mercury's early impact history and comparison with the Moon. EPSC Abstracts Vol. 12, European Planetary Science Congress, 17 – 21 September, Berlin, Germany, Abstract #EPSC-2018-533 (poster)
45. **Orgel, C.**, Ivanov, M. A., Hiesinger, H., van der Bogert, C. H., Pasckert, J. H., Michael, G. 2018: Potential landing sites within South Pole-Aitken basin, Moon: (a) Chang'e-4 exploration mission to the Apollo basin, (b) Traverses for the ISECG-GER Design Reference Mission for Humans on the Lunar Surface. CNSA-ESA Lunar Community Workshop, Amsterdam, NL (talk).
44. **Orgel, C.**, Michael, G., Fassett, C. I., van der Bogert, C. H., Riedel, C., Kneissl, T., Hiesinger, H. 2018: The lunar basin sequence based on absolute model ages derived via Buffered Non-Sparseness Correction: Implications for impactor population(s). 49<sup>th</sup> Lunar and Planetary Science Conference, 19– 23 March, Houston, TX, USA, Abstract #1395 (poster).
43. Riedel, C., Michael, G., **Orgel, C.**, Kneissl, T. 2018: An ArcGIS independent application to conduct crater size-frequency measurements with respect to crater obliteration effects. 49<sup>th</sup> Lunar and Planetary Science Conference, 19– 23 March, Houston, TX, USA, Abstract #1478.
42. **Orgel, C.**, Ivanov, M. A., Hiesinger, H., Pasckert, J. H., van der Bogert, C. H., Michael, G. 2018: Characterization of high priority landing sites for the Chang'e-4 exploration mission to the Apollo Basin, Moon. 49<sup>th</sup> Lunar and Planetary Science Conference, 19– 23 March, Houston, TX, USA, Abstract #1969.
41. Ivanov, M.A., Hiesinger, H., **Orgel, C.**, Pasckert, J. H., van der Bogert, C. H., Head, J. W. 2018: Geology of the northern portion of the SPA Basin on the Moon: Evidence for compositional stratification of the ancient lunar crust. 49<sup>th</sup> Lunar and Planetary Science Conference, 19– 23 March, Houston, TX, USA, Abstract #1138.

40. Gross, C. **Orgel, C.**, Poulet, F., Carter, J., Horgan, B. and Bishop, J. L. 2018: ExoMars 2020: High priority science targets within the Mawrth Vallis candidate landing site. 49<sup>th</sup> Lunar and Planetary Science Conference, 19– 23 March, Houston, TX, USA, Abstract #1405 (poster)
39. **Orgel, C.**, Michael, G., Fassett, C. I., van der Bogert, C. H., Riedel, C., Kneissl, T., Hiesinger, H. 2017: Ancient bombardment of the inner Solar System – Reinvestigation of the “fingerprints” of different impactor populations on the lunar surface. Paneth Kolloquium, Nördlingen, Germany (talk)
38. **Orgel, C.**, Michael, G., Kneissl, T. 2017: Ancient bombardment of the inner Solar System – Reinvestigation of the key lunar basins with a new crater counting approach, the buffered non-sparseness correction. 5<sup>th</sup> European Lunar Symposium, Münster, Germany (talk)
37. **Orgel, C.**, Allender, E. J., Almeida, N. V., Cook, J., Ende, J. J., Kamps, O., Mazrouei, S., Slezak, T. J., Soini, A. J., Kring, D. A. 2017: Landing site assessment for phase 2 of eDSH-enabled lunar missions being examined as an ISECG-GER mission scenario. 5<sup>th</sup> European Lunar Symposium, Münster, Germany (poster)
36. Mazrouei, S., Allender, E. J., Almeida, N. V., Cook, J., Ende, J. J., Kamps, O., **Orgel, C.**, Slezak, T. J., Soini, A. J., Kring, D. A. 2017: Exploration of South Polar region of the Moon: Tele-operated traverses. 5<sup>th</sup> European Lunar Symposium, Münster, Germany (poster)
35. **Orgel, C.**, Michael, G., Kneissl, T. 2017: Ancient bombardment of the inner Solar System – Reinvestigation of the “fingerprints” of different impactor populations on the lunar surface. 48<sup>th</sup> Lunar and Planetary Science Conference, 20– 25 March, Houston, TX, USA, Abstract #1033 (talk)
34. Ende, J. J., Allender, E. J., Almeida, N. V., Cook, J., Kamps, O., Mazrouei, S., **Orgel, C.**, Slezak, T. J., Soini, A. J., Kring, D. A. 2017: Landing site assessment for phase 2 of eDSH-enabled lunar missions being examined as an ISECG-GER mission scenario. 48<sup>th</sup> Lunar and Planetary Science Conference, 20– 25 March, Houston, TX, USA, Abstract #1880 (poster)
33. Kamps, O., Allender, E. J., Almeida, N. V., Cook, J., Ende, J. J., Mazrouei, S., **Orgel, C.**, Slezak, T. J., Soini, A. J., Kring, D. A. 2017: Exploration of South Polar region of the Moon: Tele-operated traverses. 48<sup>th</sup> Lunar and Planetary Science Conference, 20– 25 March, Houston, TX, USA, Abstract #1909 (poster)
32. **Orgel, C.**, Michael, G., Kneissl, T. 2016: Ancient bombardment of the inner Solar System – Reinvestigation of the “fingerprints” of different impactor populations on the lunar surface. 2<sup>nd</sup> TRR-170 Project Annual Retreat Meeting (German Research Foundation), 24 – 25 November, Hodenhagen, Germany (talk)
31. **Orgel, C.**, Hauber, E., van Gasselt, S., Pozzobon, R., Skinner, J., Jr. 2016: Distribution, origin and evolution of hypothesized mud volcanoes, thumbprint terrain, small mounds and giant polygons: Implications for sedimentary processes in the northern lowlands of Mars: Case study from the Acidalia Planitia. Geophysical Research Abstracts Vol. 18, European Geosciences Union (EGU), EGU General Assembly, 17 – 22 April, Vienna, Austria, #EGU2016-1038-2 (poster)
30. van Gasselt, S., Rossi, A. P., **Orgel, C.**, Schulz, J. 2015: Estimates of denudation rates and implications for climate control, Phlegra Montes (Mars). Geophysical Research Abstracts Vol. 17, European Geosciences Union (EGU), EGU General Assembly, 12 – 17 April, Vienna, Austria, #EGU2015-4249

29. Hauber, E., **Orgel, C.**, van Gasselt, S., Reiss, D., Johnsson, A., Ramsdale, J. D., Balme, M. R., Conway, S. J., Costard, F., Gallagher, C., Kereszturi, Á., Platz, T., Séjourné, A., Skinner, J. A., Swirad, Z., Losiak, A. 2015: Mapping Mars' Northern Plains: Origin, evolution and response to climate change – A new overview of recent ice-related landforms in Acidalia Planitia. Geophysical Research Abstracts Vol. 17, European Geosciences Union (EGU), EGU General Assembly, 12 – 17 April, Vienna, Austria, #EGU2015-15566 (poster)
28. van Gasselt, S., Rossi, A. P., **Orgel, C.**, Schulz, J. 2015: Phlegra Montes, Mars: Chronology and denudation rates. 46<sup>th</sup> Lunar and Planetary Science Conference, 16 – 20 March, Houston, TX, USA, Abstract #1371
27. **Orgel, C.**, Hauber, E., Skinner, J. A., Jr., Van Gasselt, S., Ramsdale, J. D., Balme, M. R., Séjourné, A., Kereszturi, A. 2015: Distribution, origin and evolution of hypothesized mud volcanoes, thumbprint terrain and giant polygons in Acidalia, Utopia and Arcadia Planitiae: Implications for sedimentary processes in the northern lowlands of Mars. 46<sup>th</sup> Lunar and Planetary Science Conference, 16 – 20 March, Houston, TX, USA, Abstract #1862 (poster)
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## BOOK CHAPTER

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