**Fabian E. Gruber**

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**Alia Harrison**                                                                                    Month DD, 2018

*IIASA – Human Resources*

*Schlossplatz 1*

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Dear Madam,


Best regards,


**Fabian E. Gruber**

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## Experience

### Vocational

**2013–2018**   **Research Assistant**, *Institute of Geography, University of Innsbruck*, Innsbruck.

Research projects:
- Shallow erosion dynamics in mountain grasslands of South Tyrol: Monitoring, process analysis and mitigation measures (EroDyn)
  - Geodata management: aquisition and storage of available geospatial data
  - Accuracy assessment for geographical object-based modelling of land cover with Python and Open Source GIS
  - Regional-scale landslide susceptibility mapping
- Terrain Classification of ALS Data to support Digital Soil Mapping
  - Landform delineation with statistical learning approaches and automated landform classifications
  - Field Soil Survey
  - Collaboration on the development of the Java App *SEPP (Soil Evaluation in Planning Procedures)*

**2011–2013**   **Research Assistant**, *Institute of Applied Geology, BOKU*, Vienna.

Research projects:
- Hazard assessment for an expected dam break flood in the Hunza Valley, Pakistan: A combination of GIS, Remote Sensing, and computer simulation techniques
  - Dam breach modeling with BREACH
  - Flood modeling with FLO-2D
- Poverty Alleviation through Mitigation of Integrated High-Mountain Risk (PAMIR)
  - Mapping geomorphological hazards, glaciers, and vulnerable infrastructure with remotely sensed data

**2009–2010**   **Project Assistant**, *Institue of Applied Geology, BOKU*, Vienna.

Research project:
- Remote Geohazards Assessment in Tajikistan (TajHaz)
  - Mapping geomorphological hazards and glacial lakes with remotely sensed data
  - Field survey in Tajikistan

### Miscellaneous

**2016–2017**   **Educational Leave (Bildungskarenz)**.

devoted to work on PhD thesis with the working title 'Digital terrain analysis to support field soil survey'

**2016–2017**   **Lecturer**, *Institute of Geography, University of Innsbruck*, Innsbruck.

Exercises in Statistics (Übungen zur Statistik): Introduction to statistics with R for Bachelor's students

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|---|---|
| 2010–2011 | **Student tutor**, *University of Natural Resources and Life Sciences (BOKU)* , Vienna. Tutoring for students using ArcGIS |

## Master thesis

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| title | *The 2010 Attabad Landslide Dam Lake: modeling and prediction of Lake Outburst Floods* |
| supervisors | Jean F. Schneider and Martin Mergili |

## Education

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| 2002–2011 | Diploma Study of Environmental Engineering and Water Management at the University of Natural Resources and Life Sciences (BOKU), Vienna |
| 1993–2001 | Linz International School Auhof, Linz: Austrian Matura (school leaving certificate, university entry qualification) and International Baccalaureate (IB) |
| 1991–1993 | Elementary School Linz-Pichling |
| 1989–1991 | Lincoln Elementary School Pittsburgh, PA, USA |

## Languages

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| German | Native Language |
| English | Fluent |
| Spanish | Conversant |
| French | Conversant |

## Computer skills

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| Operating systems | Windows, Linux (Ubuntu) | Scripting | R, Python, Bash |
| Geographic information systems | GRASS, QGIS, SAGA, ARCGIS | Word processing | MS Word, Libreoffice , LaTeX with Texmaker |
| Image processing | GIMP, Inkscape | Misc. software | RStudio, MS Office, FLO-2D, ENVI-Sarscape |

## Interests

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|---|---|
| Horticulture | Participating in a communal gardening project |
| Traveling | Extensive traveling in Central and South America, Central Asia, Southeast Asia and Madagascar |

## Publications

### Peer-reviewed journal articles and book chapters

[1] Gruber, F.E., Baruck, J., Geitner, C. (2017): Algorithms vs. surveyors: a comparison of automated landform delineations and surveyed topographic positions from soil mapping in an Alpine environment. Geoderma 308, 9-25.

[2] Geitner, C., Baruck, J., Freppaz, M., Godone, D., Grashey-Jansen, S., Gruber, F.E., Heinrich, K., Papritz, A., Simon, A., Stanchi, S., Traidl, R., von Albertini, N., Vrscaj, B. (2017). Soil and land use in the Alps – Challenges and examples of soil survey and soil data use to support sustainable development. In: Pereira, P., Brevik, E.C., Munoz-Rojas, M., Miller, B. (Eds.), Soil mapping and process modelling for sustainable land use management. Elsevier, Amsterdam. 221-292

[3] Baruck, J., Nestroy, O., Sartori, G., Baize, D., Traidl, R., Vrisaj, B., Bräm, E., Gruber, F.E., Heinrich, K., Geitner, C. (2016): Soil classification and mapping in the Alps: The current state and future challenges. Geoderma 264, Part B, 312–331.

[4] Zieher, T., Gruber, F.E.; Rutzinger, M.; Meißl, G.; Geitner, C.; Perzl, F. (2016): Data requirements for the assessment of shallow landslide susceptibility using logistic regression. In: Proceedings of the 12th International Symposium on Landslides - Landslides and Engineered Slopes. Experience, Theory and Practice. Napoli, Italy. CRC Press, S. 2139-2146.

[5] Gruber, F.E., Mergili, M. (2013): Regional-scale analysis of high-mountain multi-hazard and risk indicators in the Pamir (Tajikistan) with GRASS GIS. Natural Hazards and Earth System Sciences 13: 2779-2796.

[6] Schneider, J.F., Gruber, F.E., Mergili, M. (2013): Impact of large landslides, mitigation measures. In: Genevois, R., Prestininzi, A. (eds.): International Conference on Vajont - 1963-2013 - Thoughts and analyses after 50 years since the catastrophic landslide. Proceedings of the International Conference Vajont 1963-2013, Padua, Italy, October 8-10, 2013. Italian Journal of Engineering Geology and Environment - Book: 73-84.

[7] Schneider, J.F., Gruber, F.E., Mergili, M. (2013): Recent Cases and Geomorphic Evidence of Landslide-Dammed Lakes and Related Hazards in the Mountains of Central Asia. In: Margottini, C., Canuti, P., Sassa, K. (eds.): Landslide Science and Practice: Volume 6: Risk Assessment, Management and Mitigation (Proceedings of the 2nd World Landslide Forum, FAO Headquarters Rome, Italy, October 3-9, 2011): 57-64. Springer, Heidelberg, Berlin, New York

Selected conference abstracts and presentations

[8] Gruber, F.E., Baruck, J. und C. Geitner (2016): Joint analysis of parent material and topography to support soil survey – a case study from South Tyrol. Jahrestagung der Österreichischen Forschungsgruppe für Geomorphologie und Umweltwandel und der Schweizerischen Gesellschaft für Geomorphologie 2016, Innsbruck (23.09.2016).

[9] Gruber F.E., Baruck, J., Simon, A. und C. Geitner (2015): Reliefklassifizierung für die Erstellung von Bodenkarten anhand von geomorphons (GRASS GIS).– Posterausstellung im Rahmen der Jahrestagung der Deutschen Bodenkundlichen Gesellschaft, München 2015, AG Digital Soil Mapping (09.09.2015).

[10] Gruber, F.E., Zieher, T., Rutzinger, M. und C. Geitner (2015): Geomorphons and structure metrics for the characterization of geomorphological landscape regions in Austria. EGU General Assembly 2015 (EGU 2015), Wien (16.04.2015).

[11] Gruber, F.E., Baruck, J., Rutzinger, M. and C. Geitner (2014): Landform segmentation for digital soil mapping. – EGU General Assembly 2014 (28.04.-02.05.2014, Vienna (Austria)), Geophysical Research Abstracts Vol. 16, EGU2014-5644.

# References

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