

Fabian E. Gruber

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Education

- 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

Master thesis

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

Experience

Vocational

- 2013–current **Research Assistant**, *Institute of Geography, University of Innsbruck*, Innsbruck.
Research project:
 - 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 development of 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**, *Institute 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
- 2010–2011 **Student tutor**, *University of Natural Resources and Life Sciences (BOKU) , Vienna*.
 Tutoring for students in ArcGIS

Languages

German	Native Language
English	Fluent
Spanish	Conversant
French	Conversant

Computer skills

Operating systems	Windows, Linux (Ubuntu)	Languages and scripts	R, Python, Bash
Geographic information systems	GRASS, SAGA, ARCGIS	Misc. software	GIMP, Inkscape, FLO-2D, ENVI-Sarscape, \LaTeX with Texmaker

Interests

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. (*submitted*): Algorithms vs. surveyors: a comparison of automated landform delineations and surveyed topographic positions from soil mapping in an Alpine environment. *Geoderma*.

- [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. (*in press*). 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.
- [3] Baruck, J., Nestroy, O., Sartori, G., Baize, D., Traidl, R., Vrsaj, 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., 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., Geitner, C. (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, Austria.
- [9] Gruber, F.E., Baruck, J., Simon, A., Geitner, C. (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.
- [10] Gruber, F.E., Zieher, T., Rutzinger, M., Geitner, C. (2015): Geomorphons and structure metrics for the characterization of geomorphological landscape regions in Austria. EGU General Assembly 2015 (EGU 2015), Vienna, Austria.
- [11] Gruber, F.E., Baruck, J., Rutzinger, M., Geitner, C. (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.