



Assoc.-Prof. Dr. Georg Leitinger

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AREAS OF EXPERTISE

- strong expertise in systems ecology and landscape ecology of mountain ecosystems, performing process analysis on various temporal and spatial scales ranging from the ecosystem to the landscape level
- research encompassing field experiments as well as development and implementation of statistical models and scenario techniques
- main research focus: analysis of the ecological effects of land-use changes in mountain regions with special regard to biodiversity, vegetation changes, potential risks, water and carbon cycle, and ecosystem service bundles; incorporating links to socioeconomic / applied research
- latest research: (1) assessment of water balance in alpine environments using rainfall simulation, high-precision lysimetry, and surface runoff collectors; (2) analyses of surface energy balance by thermal imaging with regard to model evapotranspiration and sensible heat flux of different land-cover types; (3) quantification of ecosystem services.

PERSONAL

Born July 27th, 1976 in Schwaz (Tyrol/Austria), Austrian citizen, family status: married, 2 children

EDUCATION AND POSITIONS HELD

- since 2016: Associate Professor at the Institute of Ecology, *ResearchGroup Ecosystem and landscape Ecology*
- 2010 - 2016: Assistant Professor at the University of Innsbruck, Institute of Ecology, Dept. Ecosystem and Landscape Ecology (Habilitation in Ecology- *venia docendi*)
- 2009 - 2010: Post-Doc at the Institute of Ecology, University of Innsbruck.
- 2009: PhD at the University of Innsbruck, Institute of Ecology (pass with distinction). Dissertation: *Implications of land-use/cover change for carbon sequestration and natural hazard risks*
- 2006: Granting of a two-years PhD fellowship by the University of Innsbruck.
- 2006: Award of the Research Platform 'Alpine Space - Man and Environment', University of Innsbruck: *Outstanding Interdisciplinary Research in Alpine Space.*
- 2004 to 2006: Scientific Collaborator at the European Academy Bolzano/Bozen (Italy), Institute for Alpine Environment
- 2003 to date: Teaching at the University of Innsbruck, Institute of Ecology with the main topics Geographic Information System (GIS), Landscape Ecology, Landscape Modelling & Scenario Development, and Ecological Research Methods.
- 2003: Scientific assistant at the Institute of Botany (University of Innsbruck), Department of Ecology within the EU-project CARBOMONT.
- 2003: MSc at the Institute of Ecology, University of Innsbruck (pass with distinction). Diploma thesis within the framework of EU-project INTEGRALP and ECOMONT: *Effect of land-use changes on snow gliding and its implications.*

**CURRENT SCIENTIFIC PROJECTS:**

RESULT (2017-2019), RESilience through synergies between agricULTure and tourism. A comparison of two contrasting trajectories in the Tyrolean Alps. (ÖAW-ESS)
CLIMAGRO (2013-2017), Valorization of agriculture for the water supply in context with climate change. co-Project Leader (Autonome Provinz Bozen-Südtirol).

PUBLICATIONS (selected) please visit '<http://www.researcherid.com/rid/C-4463-2013>' for all ISI- papers

Kohler M.¹, Stotten R.¹, Steinbacher M., **Leitinger G.**, Tasser E., Schirpke U., Tappeiner U., Schermer M. (2017). Participative Spatial Scenario Analysis for Alpine Ecosystems. *Environmental Management*. DOI: 10.1007/s00267-017-0903-7 (¹ joint first authors)

Charrier G., Nolf M., **Leitinger G.**, Charra-Vaskou K., Losso A., Tappeiner U., Ameglio T., Mayr S. (2017). Monitoring of freezing dynamics in trees: a simple phase shift causes complexity. *Plant Physiology*. DOI: 10.1104/pp.16.01815

Tasser E., **Leitinger G.**, Tappeiner U. (2017). Climate Change versus Land-Use Change - What affects the mountain landscapes more? *Land Use Policy*, 60: 60-72. DOI: 10.1016/j.landusepol.2016.10.019

Kohler M., Devaux C., Grigulis K., **Leitinger G.**, Lavorel S., Tappeiner U. (2016). Plant functional assemblages as indicators of the resilience of grassland ecosystem service provision. *Ecological Indicators*. DOI: 10.1016/j.ecolind.2016.09.024

Hammerle A., Meier F., Heidl M., Egger A., **Leitinger G.** (2016) Implications of atmospheric conditions for analysis of surface temperature variability derived from landscape-scale thermography. *International Journal of Biometeorology*. DOI: 10.1007/s00484-016-1234-8.

Leitinger G., Ruggenthaler R., Hammerle A., Lavorel S., Schirpke U., Clement J.C., Lamarque P., Obojes N., Tappeiner U. (2015). Impact of droughts on water provision in managed alpine grasslands in two climatically different regions of the Alps. *Ecohydrology*. DOI: 10.1002/eco.1607

Ruggenthaler R, Schöberl F, Markart G, Klebinder K, Hammerle A, **Leitinger G** (2015) Quantification of soil moisture effects on runoff formation at the hillslope scale. *Journal of Irrigation and Drainage Engineering*. DOI: 10.1061/(ASCE)IR.1943-4774.0000880

Heidl M., Hammerle A., Tappeiner U., **Leitinger G.** (2015). Determinants of urban-rural land surface temperature differences - A landscape scale perspective. *Landscape and Urban Planning*, 134, 33-42. DOI: 10.1016/j.landurbplan.2014.10.003

Meusburger K., **Leitinger G.**, Mabit L., Mueller M. H., and Alewell C. (2014). Soil erosion by snow gliding - a first quantification attempt in a sub-alpine area, Switzerland. *Hydrology and Earth System Sciences*, 18, 1-13

Schirpke U.¹, **Leitinger G.**¹, Tasser E., Schermer M., Steinbacher M., Tappeiner U. (2013). Multiple ecosystem services on landscape level of an Alpine region: past, present, and future. *International Journal of Biodiversity Science, Ecosystem Services & Management*, 9(2), 123-135. (¹ joint first authors)

Schirpke U.¹, **Leitinger G.**¹, Tappeiner U., Tasser E. (2012). SPA-LUCC: developing land-use/cover scenarios in mountain landscapes. *Ecological Informatics*, 12, 68-76. (¹ joint first authors)

Leitinger G., Tasser E., Newesely C., Obojes N., Tappeiner U. (2010). Seasonal dynamics of surface runoff in mountain grassland ecosystems differing in land use. *Journal of Hydrology*, 385 (1-4), 95-104.

Leitinger G., Höller P., Tasser E., Walde J., Tappeiner U. (2008). Development and Validation of a Spatial Snow-Glide Model. *Ecological Modelling*, 211, 363-374.

REVIEW ACTIVITIES: Ecological Modelling, Journal of Hydrology, Landscape and Urban Planning, Annals of Glaciology, Water Resources Research, Natural Hazards, Journal of Geography and Regional Planning, AMBIO, Forests, Agriculture Ecosystems & Environment, Water

POSTER & ORAL PRESENTATIONS: ca. 45 posters / 45 oral presentations at national and international conferences