

Publication list Yves Bühler

Peer-reviewed ISI publications:

- Helbig, N., Schirmer, M., Magnusson, J., Mäder, F., van Herwijnen, A., Quéno, L., **Bühler, Y.**, Deems, J. S., and Gascoin, S. (2021): A seasonal algorithm of the snow-covered area fraction for mountainous terrain, *The Cryosphere*, 15, 4607-4624, 10.5194/tc-15-4607-2021.
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- Hafner, E. D., Techel, F., Leinss, S., and **Bühler, Y.** (2021): Mapping avalanches with satellites – evaluation of performance and completeness, *The Cryosphere*, 15, 983-1004, 10.5194/tc-15-983-2021.
- Helbig, N., **Bühler, Y.**, Eberhard, L., Deschamps-Berger, C., Gascoin, S., Dumont, M., Revuelto, J., Deems, J. S., and Jonas, T. (2021): Fractional snow-covered area: scale-independent peak of winter parameterization, *The Cryosphere*, 15, 615-632, 10.5194/tc-15-615-2021.
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- Krasilnikov, S. S., Kuzmin, R. O., **Bühler, Y.**, and Zabalueva, E. V. (2020): Formation of long-distance water ice avalanches on mars, *Planetary and Space Science*, 186, 10.1016/j.pss.2020.104917.
- Brožová, N., Fischer, J.-T., **Bühler, Y.**, Bartelt, P., and Bebi, P. (2020): Determining forest parameters for avalanche simulation using remote sensing data, *Cold Regions Science and Technology*, 172, 10.1016/j.coldregions.2019.102976.
- Bühler, Y.**, Hafner, E., Zweifel, B., Zesiger, M. and Heisig, H. (2019): Where are the avalanches? Rapid SPOT6 satellite data acquisition to map an extreme avalanche period over the Swiss Alps, *The Cryosphere*, 13(12), 3225-3238, doi:10.5194/tc-13-3225-2019.
- Caviezel, A., Demmel, S. E., Ringenbach, A., **Bühler, Y.**, Lu, G., Christen, M., Dinneen, C. E., Eberhard, L. A., von Rickenbach, D., and Bartelt, P. (2019): Reconstruction of four-dimensional rockfall trajectories using remote sensing and rock-based accelerometers and gyroscopes, *Earth Surface Dynamics*, 7, 199-210, 10.5194/esurf-7-199-2019.
- Lu, G., Caviezel, A., Christen, M., Demmel, S. E., Ringenbach, A., **Bühler, Y.**, Dinneen, C. E., Gerber, W., and Bartelt, P. (2019): Modelling rockfall impact with scarring in compactable soils, *Landslides*, 10.1007/s10346-019-01238-z.

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- Kääb, A., S. Leinss, A. Gilbert, **Y. Bühler**, S. Gascoin, S. G. Evans, P. Bartelt, E. Berthier, F. Brun, W.-A. Chao, D. Farinotti, F. Gimbert, W. Guo, C. Huggel, J. S. Kargel, G. J. Leonard, L. Tian, D. Treichler and T. Yao (2018): Massive collapse of two glaciers in western Tibet in 2016 after surge-like instability. *Nature Geoscience*, doi: 10.1038/s41561-017-0039-7
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- Kenner, R., M. Phillips, C. Hauck, C. Hilbich, C. Mulsow, **Y. Bühler**, A. Stoffel, and M. Buchroithner (2017): New insights on permafrost genesis and conservation in talus slopes based on observations at Flüelapass, Eastern Switzerland, *Geomorphology*, 290, 101-113, doi:10.1016/j.geomorph.2017.04.011.
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Outreach publications and reports:

Bühler, Y., Hafner, E. and Techel, F. (2021): Mapping avalanches with Satellites – the vision of more complete avalanche datasets, *IEEE IGARSS Proceedings*.

Bühler, Y., Bührlé, L., Eberhard, L., Marty, M. und Stoffel, A. (2021): Grossflächige Schnehöhen-Kartierung mit Flugzeug und Satellit, *Geomatik Schweiz*. 9/2021, 20 – 23.

Bühler, Y., Bebi, P. Christen, M., Margreth, S., Stoffel, L., Stoffel, A., Marty, C., Schmucki, G. und von Rickenbach, D. (2020): Gefahrenhinweiskarte Lawinen Kanton Graubünden, WSL- Institut für Schnee- und Lawinenforschung SLF.

Bühler, Y., Bebi, P. Christen, M., Margreth, S., Stoffel, L., Stoffel, A., Marty, C., Schmucki, G. und von Rickenbach, D. (2020): Gefahrenhinweiskarte Lawinen Liechtenstein, WSL- Institut für Schnee- und Lawinenforschung SLF.

Leitenerer, R., Wulf, H., G., M., Sassik, B., **Bühler, Y.**, and Wegner, J. D. (2020): Schneekartierung aus dem All – das Potenzial frei verfügbarer Satellitendaten, *Wasser Energie Luft*, 112, 4.

Noetzli, C., **Bühler, Y.**, Lorenzi, D., Stoffel, A., and Rohrer, M. (2019): Schneedecke als Wasserspeicher - Drohnen können helfen, die Abschätzungen der Schneereserven zu verbessern, *Wasser, Energie, Luft*, 111, 2019.

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- Adams, M.S., **Bühler, Y.**, Boesch, R., Fromm, R., Stoffel, A. & Ginzler, C. (2016): Investigating the Potential of Low-Cost Remotely Piloted Aerial Systems for Monitoring the Alpine Snow Cover (RPAS4SNOW). Final Project Report, ÖAW – Austrian Academy of Sciences, Innsbruck (Austria), pp. 82.
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- Phillips, M.; Kos, A.; Amann, F.; Bonanomi, Y.; Huwiler, A.; Negrini, M.; Lüthi, R.; Kenner, R.; Wolter, A.; **Bühler, Y.**, (2016): Deep-seated rock slope failures in mountain permafrost: Pizzo Cengalo and Piz Kesch (Canton Grisons, Switzerland). [Abstract] In: Koboltschnig, G. (ed) *13th Congress Interpraevent 2016. 30 May to 2 June 2016, Lucerne, Switzerland. Extended Abstracts. Living with natural risks. Luzern, International Research Society Interpraevent*. 148-149.
- Bühler, Y.** Bösch, R., Stoffel, A. & Adams, M. (2015): Geodatenerfassung im hochalpinen Gelände mittels Drohnen. *Geomatik Schweiz* 9/2015, 366 – 370.
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- Ginzler, C., Marty, M. & **Bühler, Y.**, (2013): Cartes de hauteurs de neige à haute résolution de zones étendues produites à partir de stéréophotographies aériennes numériques. *Geomatik Schweiz* 111, 9: 512-514.
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- Jörg, P., Granig, M., **Bühler, Y.**, Gauer, P. & Schreiber, H. (2012): Vergleich von gemessenen und simulierten Lawinengeschwindigkeiten. *Wildbach- und Lawinverbau*, 76, 214-225.
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Bühler, Y., Seidel, F. & Kellenberger, T. (2006): Schnelle Schadenskartierung mit Satellitendaten während den Überschwemmungen 2005 zur Unterstützung des Katastrophen-Managements, *Geomatik Schweiz* 9/2006: 494 – 497.

Conference papers and selected talks:

Bühler, Y. (2021): Remote sensing tools for mountain risk monitoring and mitigation, *Workshop on Climate Change and Mountain Risks in the European Alps - from Recognition to Management*, Saas Fee, Switzerland, Talk 26. 08. 2021.

Bühler, Y. (2021): Remote sensing for snow and avalanche research, *IGS seminar online*, , Talk 07. 07. 2021.

Bühler, Y. (2020): AUS applications @SLF, Visit of the *Wingtra software development group* at SLF, Talk 11. 09. 2020.

Bühler, Y. (2020): Avalanches down under – research exchange in New Zealand, *SLF Kolloquium*, Talk 30. 06. 2020.

Bühler, Y. (2020): Automatish generierte Gefahrenhinweiskarte Lawinen Kanton Graubünden *Gefahrenkommision, Amt für Wald und Naturgefahren, Kanton Graubünden, Chur, Switzerland*, Talk 12. 06. 2020.

Ringebach, A., Caviezel, A., Demmel, S. E., Lu, G., **Bühler, Y.**, Christen, M., Bartelt, P., and Meier, L. (2020): Three-dimensional trajectory reconstruction of induced single block Rockfall experiments, *Rock Mechanics for Natural Resources and Infrastructure Development- Proceedings of the 14th International Congress on Rock Mechanics and Rock Engineering, ISRM 2019*, 2887-2894.

Bühler, Y. (2019): Efficient geodata acquisition in alpine terrain with optical Remote Sensing *Seminar School of Surveying, University of Otago, Dunedin, New Zealand*, Talk 15. 08. 2019.

Bühler, Y. (2019): UAS based Snow Depth Mapping-The Wägital Case Study. *Climate-Seminar, MeteoSchweiz, Zürich Flughafen, Switzerland*, Talk 17. 01. 2019.

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ORCID: <https://orcid.org/0000-0002-0815-2717>

Research ID: <http://www.researcherid.com/rid/B-9859-2011>

Google Scholar: https://scholar.google.ch/citations?user=szd_SBkAAAAJ&hl=de

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