

WGMS paper library as of January 2020

References

- Aellen, M. (1985), Les variations récentes des glaciers des alpes suisses, *Geografia Fisica e Dinamica Quaternaria*, 8, 73–82.
- Ageta, Y., and T. Kadota (1992), Predictions of changes of glacier mass balance in the Nepal Himalaya and Tibetan Plateau: a case study of air temperature increase for three glaciers, *Annals of Glaciology*, 16, 89–94.
- Albert, T. H. (2002), Evaluation of remote sensing techniques for ice-area classification applied to the tropical Quelccaya Ice Cap, Peru, *Polar Geography*, 26(3), 210–226.
- Albrecht, O., P. Jansson, and H. Blatter (2000), Modelling glacier response to measured mass-balance forcing, *Annals of Glaciology*, 31, 91–96.
- Alean, J. (1984), Ice avalanches and a landslide on Grosser Aletschgletscher, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 20, 9–25.
- Alean, J., and F. Müller (1977), Zum Massenhaushalt des Baby Glacier, Axel Heiberg Island, kanadische Hocharktis, *Geographica Helvetica*, 32(4), 203–208.
- Allison, I. (1974), Morphology and dynamics of the tropical glaciers of Irian Jaya, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 10, 129–152.
- Alonso, F., P. Nicolás, and E. Martínez (1983), Los glaciares españoles actuales.
- Ambach, W. (1978), Ist die Umwelt durch radioaktiven atmosphärischen Fall-out noch kontaminiert?, *Wetter und Leben*, 30, 165–169.
- Ambach, W. (1979a), Zum Wärmehaushalt des Grönländischen Inlandeis: Vergleichende Studie im Akkumulations- und Ablationsgebiet, *Polarforschung*, 49(1), 44–54.
- Ambach, W. (1979b), Zur Nettoeisablation in einem Höhenprofil am Grönländischen Inlandeis, *Polarforschung*, 49(1), 55–62.
- Ambach, W. (1980a), Increased CO₂ concentration in the atmosphere and climate change: Potential effects on the Greenland Ice Sheet, *Wetter und Leben*, 23(3), 135–142.
- Ambach, W. (1980b), Zur Kontamination von Firnschichten durch radioaktiven Fallout, *Polarforschung*, 50(1/2), 17–22.
- Ambach, W. (1983a), Der Beitrag Österreichs zur Internationalen Glaziologischen Grönlandexpedition 1959 und 1967, in *100 Jahre Polarforschung*.
- Ambach, W. (1983b), Zur erhöhten erythemwirksamen Dosis bei Abnahme der Ozonkonzentration in der Atmosphäre, *medwelt*, 34, 204–206.
- Ambach, W. (1986), Nomographs for the determination of melt from snow- and ice surfaces, *Ber. nat.-med. Verein, Innsbruck*, 73, 7–15.
- Ambach, W. (1988a), Interpretation of the positive degree-days-factor by heat balance characteristics - West Greenland, *Nordic Hydrology*, 19, 217–224.

- Ambach, W. (1988b), Heat balance characteristics and ice ablation, Western Egid-Profile, Greenland. The Seventh Northern Research Basins Symposium/Workshop, in *Applied Hydrology in the Development of Northern Basins*, pp. 59–69.
- Ambach, W. (1988c), Vor 100 Jahren: Auf Schneeschuhen durch Grönland. Wendepunkt der Erforschung des Grönländischen Inlandeises., *Polarforschung*, 55(1), 53–55.
- Ambach, W., and M. Blumthaler (1987), Solare UV-Strahlung im Hochgebirge und ihre Bedeutung für den Menschen, *Ber. nat.-med. Verein, Innsbruck*, 74, 7–17.
- Ambach, W., and A. Denoth (1980), The dielectric behaviour of snow: a study versus liquid water content, in *Microwave Remote Sensing of Snowpack Properties*, pp. 69–92.
- Ambach, W., and H. Eisner (1970), Grundlagen und Ergebnisse von kernphysikalischen Untersuchungen auf Alpengletschern, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 6(1-2), 91–105.
- Ambach, W., and H. Eisner (1980), Neue Ergebnisse von Messungen der Gesamt-Beta-Aktivität in Tiefenprofilen am Kesselwandferner (Ötztaler Alpen), *Zeitschrift für Gletscherkunde und Glazialgeologie*, 16(1), 131–133.
- Ambach, W., and H. Eisner (1983), Effective shear viscosity and effective bulk viscosity of firn of a temperate glacier (Kesselwandferner, Ötztal Alps, 1967-1978, *Annals of Glaciology*, 4, 10–13.
- Ambach, W., and H. Eisner (1985), Rheological properties of temperate firn, *Polarforschung*, 55(2), 71–77.
- Ambach, W., and H. Eisner (1986), Proposal for a constitutive equation of temperate firn, *Cold Regions Science and Technology*, 13, 1–9.
- Ambach, W., and H. Eisner (1988), Ein nichtlineares Fließgesetz für temperierten Firn mit deviatorischen und isotropen Termen, *Beiträge zur Wildbacherossions- und Lawinenforschung. Mitteilungsband*, 159, 315–322.
- Ambach, W., and H. Hoinkes (1963), The heat balance of an alpine snowfield (Kesselwandferner, 3240m, Oetztal Alps, August 11-Sept.8, 1958) Preliminary communication, *I.A.S.H. Commission of Snow and Ice*, 61, 24–36.
- Ambach, W., and P. Kirchlechner (1986), Nomographs for the determination of meltwater from ice- and snow surfaces by sensible and latent heat, *Wetter und Leben*, 38, 181–189.
- Ambach, W., and M. Kuhn (1985), Accumulation gradients in Greenland and Mass Balance response to climatic changes, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 21, 311–317.
- Ambach, W., and M. Kuhn (1989), *Glacier fluctuations and climatic change. Proceedings of the symposium on glacier fluctuations and climatic change, held in Amsterdam, 1-5 June 1987*, chap. Altitudinal shift of the equilibrium line in Greenland calculated from heat balance characteristics, pp. 281–288, Kluwer Academics Publishers.
- Ambach, W., and G. Markl (1981), Messungen der atmosphärischen Trübung am Grönländischen Inlandeis während der Internationalen Glaziologischen Grönlandexpedition 1959 und 1967, *Polarforschung*, 51, 129–137.
- Ambach, W., and B. Mayr (1981), Ski gliding and water film, *Cold Regions Science and Technology*, 5, 59–65.

- Ambach, W., and F. Müller (1980), Determination of net accumulations from gross beta activity measurements in the North Water Region, *Polarforschung*, 50(1/2), 1–7.
- Ambach, W., and W. Rehwald (1982), Measurements of the decay rate of the gross beta activity in firn samples from an alpine glacier, Kesselwandferner, Ötztal Alps, Austria, *Arctic and Alpine Research*, 14(2), 163–166.
- Ambach, W., and W. Rehwald (1983), Measurements of the annual variation of the erythema dose of global radiation, *Radiat Environ Biophys*, 21, 295–303.
- Ambach, W., and W. Rehwald (1985), Contamination of firn layers by radioactive fission products from atmospheric fallout, *Health Physics*, 49(6), 1173–1176.
- Ambach, W., H. Eisner, and R. Haefeli (1971), Bestimmung von Firnrücklagen am Eisschild Jungfrauojoch durch Messung der Gesamt-Betaaktivität von Firnproben, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 7(1), 58–63.
- Ambach, W., M. Blumthaler, and P. Kirchlechner (1981), Application of the gravity flow theory to the percolation of melt water through firn, *Journal of Glaciology*, 27(95), 67–75.
- Ambach, W., P. Kirchlechner, H. Moser, and W. Stichler (1982), Seasonal variations of deuterium concentration in runoff from a glacierized basin, *Hydrological Sciences - Journal des Sciences Hydrologiques*, 27(1), 29–34.
- Ambach, W., H. Eisner, E. Meyer, and H. Schneider (1986), Zum winterlichen Kälteverrat in einem temperierten Alpengletscher, *Polarforschung*, 56(1/2), 65–67.
- Ambach, W., W. Rehwald, M. Blumthaler, and H. Eisner (1987a), Radioactive fall-out on alpine glaciers from the Chernobyl nuclear accident, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 23(2), 123–129.
- Ambach, W., W. Rehwald, M. Blumthaler, and H. Eisner (1987b), Chernobyl fallout on alpine glaciers: A new reference horizon for dating, *EOS*, 68(45), 1577.
- Ambach, W., W. Rehwald, M. Blumthaler, and P. Brunner (1987c), Reaktorunfall Tschernobyl: Kontamination von Schneeschichten auf Alpengletschern, *Medizinische Physik*, 1, 276–281.
- Ambach, W., M. Blumthaler, W. Rehwald, U. Nickus, G. Tanzer, and H. Eisner (1987d), Strahlenbelastung im Hochgebirge nach dem Reaktorunfall in Tschernobyl, *Wetter und Leben*, 39, 121–124.
- Ambach, W., W. Rehwald, and M. Blumthaler (1988), Displacement of Chernobyl fallout in snow layers of temperate alpine glaciers, *The Science of the Total Environment*, 76, 101–107.
- Ambach, W., W. Rehwald, M. Blumthaler, H. Eisner, and P. Brunner (1989a), Chernobyl fallout on alpine glaciers, *Health Physics*, 56(1), 27–31.
- Ambach, W., W. Rehwald, M. Blumthaler, and H. Eisner (1989b), Radioactive fallout from Chernobyl accident provides new tool for dating alpine glaciers, *Earth in Space*, 1(7), 6–7.
- Ammann, K. (1975), Gletschnahe Vegetation in der Oberaar (Grimsel) einst und jetzt. Die historischen Schwankungen des Oberaargletschers, die heutige Vegetation der Oberaar und erste Ergebnisse der pollenanalytischen Untersuchungen gletschnaher Bodenprofile, *Mitteilungen der Naturforschenden Gesellschaft in Bern*, 32, 122–128.

- Ananicheva, M. D., and A. N. Krenke (2005), Evolution of climatic snow line and equilibrium line altitudes in the North-Eastern Siberia Mountains (20th century), in *Ice and Climate News*, No. 6, July 2005.
- Anderson, R. S. (1984), The Galloping Glacier of Russell Fjord, *alaskafest*, June, 34–40.
- Aniya, M., A. S. Dhakal, S. Park, and R. Naruse (2000), Variations of Patagonia glaciers, South America, using RADARSAT and Landsat images, *Canadian Journal of Remote Sensing*, 26(6), 501–511.
- Arendt, A. A., K. Echelmeyer, W. D. Harrison, C. S. Lingle, and V. B. Valentine (2002), Rapid wastage of Alaska. Glaciers and their contribution to rising sea level, *Science*, 297, 382–386.
- Arendt, A. A., S. B. Luthcke, and R. Hock (2009), Glacier changes in Alaska: can mass-balance models explain GRACE mascon trends?, *Annals of Glaciology*, 50, 148–154.
- Arnold, N. S., I. C. Willis, M. J. Sharp, K. S. Richards, and W. J. Lawson (1996), A distributed surface energy-balance model for a small valley glacier. I. Development and testest for Haut Glacier d’Arolla, Valais, Switzerland, *Journal of Glaciology*, 42(140), 77–89.
- Aschenbrenner, J., and H. Slupetzky (1992), Erläuterungen zur Karte des Ödenwinkelkees-Vorfeldes 1:10.000, *Geographischer Jahresbericht aus Österreich*, pp. 66–76, Sonderdruck aus Band LI (1992).
- Assier, A. (1985), Les variations récentes d’un glacier de cirque des Alpes Sud-occidentales françaises: l’exemple du glacier oriental de Marinnet (Haute-Ubaye).
- Atsumu, O. (1984), Comparative energy balance study for the arctic tundra, sea surface, glacier and boreal forests, *GeoJournal*, 8.3, 221–228.
- Aubert, D. (1986), La récurrence des glaciers jurassiens entre la Venoge et l’Aubonne, *Bull. Soc. Vaud. Sc. Nat.*, 78(1), 21–46.
- Azam, M. F., et al. (2012), From balance to imbalance: a shift in the dynamic behaviour of Chhota Shigri glacier, Western Himalaya, India, *Journal of Glaciology*, 58(208), 315–324, doi: 10.3189/2012JoG11J123.
- Bachmann, R. C. (1981), Ein eiskaltes Abenteuer, *Die Weltwoche*, 35, 28–29.
- Bader, H. (1954), Sorge’s law of densification of snow on high polar glaciers, *Journal of Glaciology*, 2(15), 319–323.
- Baelum, K., and D. I. Benn (2011), Thermal structure and drainage system of a small valley glacier (Tellbreen, Svalbard), investigated by ground penetrating radar, *The Cryosphere*, 5, 139–149, doi:10.5194/tc-5-139-2011.
- Bahr, D. B. (1997), Global distributions of glacier properties: A stochastic scaling paradigm, *Water Resources Research*, 33(7), 1669–1679.
- Bahr, D. B., M. F. Meier, and S. D. Peckham (1997), The physical basis of glacier volume-area scaling, *Journal of Geophysical Research*, 102(B9), 20,355–20,362.
- Bahr, D. B., M. B. Dyurgerov, and M. F. Meier (2009), Sea level rise from glaciers and ice caps: A lower bound, *Geophysical Research Letters*, 36, L03,501, doi:10.1029/2008GL036309.

- Bailey, P. K. (1985), Periglacial landforms and processes in the Southern Kenai Mountains, Alaska, *Tech. rep.*, Cold Regions Research and Engineering Laboratory & US Army Corps of Engineers.
- Bajrachayra, S. R., and P. Mool (2009), Glaciers, glacial lakes and glacial lake outburst floods in the Mount Everest region, Nepal, *Annals of Glaciology*, *50*(53), 81–86.
- Balch, E. S. (1897), Ice cave hunting in Central Europe, *Appalachia*, *8*, 10.
- Balch, E. S. (1899), Subterranean ice deposits in America, *Journal of the Franklin Institute*, *80*, 1–12.
- Ballagh, L. M., B. H. Raup, R. E. Duerr, S. J. S. Khalsa, C. Helm, D. Fowler, and A. Gupte (2011), Representing scientific data sets in KML: Methods and challenges, *Computers & Geosciences*, *37*, 57–64, doi:10.1016/j.cageo.2010.05.004.
- Baltzer, A. (1906), Ueber eine Grabenversenkung in glacialen Kiesen, *Mitteilungen der Naturforschenden Gesellschaft Bern*, *53*, 1–3.
- Barandun, M., M. Huss, R. Usabaliyev, E. Azisov, E. Berthier, A. Kääh, T. Bolch, and M. Hoelzle (2018), Multi-decadal mass balance series of three Kyrgyz glaciers inferred from modelling constrained with repeated snow line observations, *The Cryosphere*, *12*(6), 1899–1919.
- Barnett, T. P., J. C. Adam, and D. P. Lettenmaier (2005), Potential impacts of a warming climate on water availability in snow-dominated regions, *Nature*, *438*, 303–309, doi:10.1038/nature04141.
- Barnett, T. P., et al. (2008), Human-induced changes in the hydrology of the Western United States, *Science*, *319*, 1080–1083.
- Baroni, C. (1988), The Hells Gate and Backstairs Passage ice shelves, Victoria Land, Antarctica, *Memorie della Societa Geologica Italiana*, *34*, 123–144.
- Baroni, C., and G. Orombelli (1991), Holocene raised beaches at Terra Nova Bay, Victoria Land, Antarctica, *Quaternary Research*, *36*, 157–177.
- Barry, R. G. (1990), Changes in climate and glacio-hydrological responses, *Mountain Development*, *10*(2), 161–170.
- Barry, R. G. (2006), The status of research on glaciers and global glacier recession: a review, *Physical Geography*, *30*(3), 285–306.
- Barry, R. G., W. H. Arundale, J. T. Andrews, R. S. Bradley, and H. Nichols (1977), Environmental change and cultural change in the eastern Canadian Arctic during the last 5000 years, *Arctic and Alpine Research*, *9*(2), 193–210.
- Barry, R. G., J. Jania, and K. Birkenmajer (2011), A. B. Dobrowolski - the first cryospheric scientist - and the subsequent development of cryospheric science, *History of Geo and Space Sciences*, *2*, 75–79, doi:10.5194/hgss-2-75-2011.
- Barsch, D. (1968a), Periglaziale Seen in den Karstwannen des Schweizer Juras, *Regio Basiliensis*, *9*, 115–134.
- Barsch, D. (1968b), Die pleistozänen Terrassen der Birs zwischen Basel und Delsberg, *Regio Basiliensis*, *9*(2), 363–383.
- Barsch, D. (1968c), Die geomorphologische Übersichtskarte 1:250000 der Basler Region, *Regio Basiliensis*, *9*(2), 384–402.

- Barsch, D. (1969), Studien und Messungen an Blockgletschern in Macun, Unterengadin, *Zeitschrift für Geomorphologie*, 8, 11–30.
- Barsch, D. (1971), Rock glaciers and ice-cored moraines, *Geografiska Annaler*, 53, 203–213.
- Barsch, D. (1973), Refraktionsseismische Bestimmung der Obergrenze des gefrorenen Schuttkörpers in verschiedenen Blockgletschern Graubündens, Schweizer Alpen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 9(1-2), 143–167.
- Barsch, D. (1976), Das GMK-Schwerpunktprogramm der DFG: Geomorphologische Detailkartierung in der Bundesrepublik, *Geomorphologie. N. F.*, 20(4), 488–498.
- Barsch, D. (1977), Alpiner Permafrost - ein Beitrag zur Verbreitung, zum Charakter und zur Ökologie am Beispiel der Schweizer Alpen, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, 31, 117–141.
- Barsch, D. (1980), Die Beziehungen zwischen der Schneegrenze und der Untergrenze der aktiven Blockgletscher, *Arbeiten aus dem Geographischen Institut der Universität des Saarlandes*, 29, 119–133.
- Barsch, D. (1981a), Ergebnisse der Heidelberg Ellesmere Island Expedition. Studien zur gegenwärtigen Geomorphodynamik im Bereich der Oobloyah Bay, N-Ellesmere Island, N.W.T., Kanada, *Heidelberger Geographische Arbeiten*, 69, 123–161.
- Barsch, D. (1981b), Ergebnisse der Heidelberg Ellesmere Island Expedition. Terrassen, Flussarbeit und das Modell der exzessiven Talbildungszone im Expeditionsgebiet Oobloyah Bay, N-Ellesmere Island, N.W.T., Kanada, *Heidelberger Geographische Arbeiten*, 69, 163–201.
- Barsch, D. (1981c), Ergebnisse der Heidelberg Ellesmere Island Expedition. Zur Geomorphologie des Expeditionsgebietes Oobloyah Bay, N-Ellesmere Island, N.W.T., Kanada, *Heidelberger Geographische Arbeiten*, 69, 109–122.
- Barsch, D. (1988), *Advances in Periglacial Geomorphology*, chap. Rockglaciers, pp. 69–90, John Wiley & Sons Ltd.
- Barsch, D. (1990), Geomorphology and geoecology, *Geomorphologie. N. F.*, 79, 39–49.
- Barsch, D., and G. Hell (1973), Photogrammetrische Bewegungsmessungen am Blockgletscher Murtèl I, Oberengadin, Schweizer Alpen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 9(2), 111–142.
- Barsch, D., and L. King (1979), Die Heidelberg Ellesmere Island Expedition - Erster Bericht, *Marburger Geographische Schriften*, 79, 45–56.
- Barsch, D., and L. King (1981), Ergebnisse der Heidelberg Ellesmere Island Expedition. Zielsetzung und Ablauf der Heidelberg-Ellesmere Island-Expedition 1978, *Heidelberger Geographische Arbeiten*, 69, 1–14.
- Barsch, D., and G. Müller (1981), Ergebnisse der Heidelberg Ellesmere Island Expedition. Rezente Eisenablagerung und Schwermetallakkumulation im Access-See, Oobloyah Bay, N-Ellesmere Island, N.W.T., Kanada, *Heidelberger Geographische Arbeiten*, 69, 507–520.
- Barsch, D., and C. F. Royse (1972), A model for development of Quaternary terraces and pediment-terraces in the southwestern United States of America, *Geomorphologie. N. F.*, 16(1), 54–75.

- Barsch, D., and W. Schuster (1981), Die Erfassung von Daten zum Substrat und zur Geomorphodynamik auf geomorphologischen Karten (GMK 25) mit dem Geomorphologischen Symbolschlüssel (GMS) und auf Computerkarten, *Geomorphologie. N. F.*, 39, 29–38.
- Barsch, D., H. Fierz, and W. Haeberli (1979), Shallow core drilling and bore-hole measurements in Permafrost of an active rock glacier near the Grubengletscher, Wallis, Swiss Alps, *Arctic and Alpine Research*, 11(2), 215–228.
- Barsch, D., L. King, and R. Mäusbacher (1981), Ergebnisse der Heidelberg Ellesmere Island Expedition. Glaziologische Beobachtungen an der Stirn des Webber-Gletschers, Borup-Fjord-Gebiet, N-Ellesmere Island, N.W.T., Kanada, *Heidelberger Geographische Arbeiten*, 69, 269–284.
- Bataklijev, I. (1972), *Geoecology of the high-mountain regions of Eurasia*, chap. Die hochgebirge Bulgariens, pp. 141 – 146, Franz Steiner Verlag.
- Battle, W. R. B., and W. V. Lewis (1951), Temperature observations in Bergschrunds and their relationship to cirque erosion, *Journal of Glaciology*, 59(6), 537–545.
- Bauder, A., M. Funk, and M. Huss (2007), Ice-volume changes of selected glaciers in the Swiss Alps since the end of the 19th century, *Annals of Glaciology*, 46, 145–149.
- Bauder, A., et al. (2008), On the outburst of glacier-dammed lakes: Gornergletscher, Valais, *Bulletin für angewandte Geologie*, 13(2), 17–21.
- Bauer, A. (1956), Contribution à la connaissance du Vatnajökull - Islande, *Jökull*, 3, 3–19.
- Bauer, A. (1968), Le glacier de l'Eqe (eqip sermia) mouvement et variations du front (1959), *Meddelelser om Grønland*, 174, 21 pp.
- Baug, M. N., W. Tranquillini, and W. M. Havranek (1974), Cuticuläre Transpiration von Picea-abies und Pinus-cembra-Zweigen aus verschiedener Seehöhe und ihre Bedeutung für die winterliche Austrocknung der Bäume an der alpinen Waldgrenze, *Centralblatt für das gesamte Forstwesen*, 91(4), 195–211.
- Beck, A. E. (1977), Climatically perturbed temperature gradients and their effect on regional and continental heat-flow means, *Tectonophysics*, 41, 17–39.
- Beedle, M. J., B. Menounos, B. H. Luckman, and R. Wheate (2009), Annual push moraines as climate proxy, *Geophysical Research Letters*, 36, L20,501, doi:10.1029/2009GL039533.
- Béguin, C., and J. Theurillat (1981), Impact des pistes de ski sur les lacs alpins, *Les Alpes*, 57, 3–8.
- Béguin, C., and J. Theurillat (1982), Une association végétale des zones humides périglaciaires de l'étage alpin sur silice, *Bulletin Murithienne*, 99, 33–60.
- Beniston, M. (2005), Mountain climates and climatic change: An overview of processes focussing on the European Alps, *Pure and Applied Geophysics*, 162, 1587–1606.
- Beniston, M., W. Haeberli, M. Hoelzle, and A. Taylor (1997), On the potential use of glacier and permafrost observations for verification of climate models, *Annals of Glaciology*, 25, 400–406.
- Berner, W., P. Bucher, H. Oeschger, and B. Stauffer (1977), Analysis and interpretation of gas content and composition in natural ice, in *Isotopes and impurities in snow and ice - Symposium Grenoble 1975*.

- Berthier, E., E. Schiefer, G. K. C. Clarke, B. Menounos, and F. Rémy (2010), Contribution of Alaskan glaciers to sea-level rise derived from satellite imagery, *Nature Geoscience*, *3*, 92–95, doi:10.1038/NGEO737.
- Bezzola, G. R., P. Kuster, and S. Pellandini (1990), The Reuss river flood of 1987 - Hydraulic model tests and reconstruction concepts, in *International Conference on River Flood Hydraulics*.
- Bhambri, R., and T. Bolch (2009a), Glacier mapping: A review with special reference to the Indian Himalayas, *Progress in Physical Geography*, *33*(5), 672–704, doi:10.1177/0309133309348112.
- Bhambri, R., and T. Bolch (2009b), Glacier mapping: a review with special reference to the Indian Himalayas, *Progress in Physical Geography*, *33*(5), 672–704, doi:10.1177/0309133309348112.
- Bhatt, N., S. Hastenrath, and P. Kruss (1980), Ice thickness determination at Lewis Glacier, Mount Kenya: Seismology, gravimetry, dynamics, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *16*(2), 213–228.
- Bindschadler, R. A. (1982), A numerical model of temperate glacier flow applied to the quiescent phase of a surge-type glacier, *Journal of Glaciology*, *28*(99), 239–265.
- Bindschadler, R. A. (1983), The importance of pressurized subglacial water in separation and sliding at the glacier bed, *Journal of Glaciology*, *29*(101), 3–19.
- Bindschadler, R. A., and R. Gore (1982), A time-dependent ice sheet model: Preliminary results, *Journal of Geophysical Research*, *87*, 9675–9685.
- Björnsson, H. (1978), The surface area of glaciers in Iceland, *Jökull*, *28*, 31.
- Björnsson, H. (1979), 9 glaciers in Iceland, *Jökull*, *29*, 74–80.
- Björnsson, H., and P. Einarsson (1990), Volcanoes beneath Vatnajökull, Iceland: Evidence from radio echo-sounding, earthquakes and jökulhaups, *Jökull*, *40*, 147–168.
- Björnsson, H., Y. Gjessing, S.-E. Hamran, J. O. Hagen, O. Liestøl, F. Pálsson, and B. Erlingsson (1996), The thermal regime of sub-polar glaciers mapped by multi-frequency radio-echo sounding, *Journal of Glaciology*, *42*, 23–32 (Separatum).
- Blachut, T. J., and F. Müller (1966), Some fundamental considerations on glacier mapping, *Canadian Journal of Earth Sciences*, *3*(6), 747–759.
- Blatter, H., and W. Haeberli (1984), Modelling temperature distribution in alpine glaciers, *Annals of Glaciology*, *5*, 18–22.
- Blumthaler, M., and W. Ambach (1988a), Human solar ultraviolet radiant exposure in high mountains, *Atmospheric Environment*, *22*(4), 749–753.
- Blumthaler, M., and W. Ambach (1988b), Solar UVB-albedo of various surfaces, *Photochemistry and Photobiology*, *48*(1), 85–88.
- Bodmer, R., A. Matter, E. Scheller, and M. Sturm (1973), Geologische, seismische und pollenanalytische Untersuchungen im Bördeli bei Interlaken, *Mitteilungen der Naturforschenden Gesellschaft Bern*, *30*, 51–62.
- Bøggild, C. E., N. Reeh, and H. Oerter (1994), Modelling ablation and mass-balance sensitivity to climate change of Storstrømmen, Northern Greenland, *Global and Planetary Change*, *9*, 79–90.

- Bögli, A. (1969), Neue Anschauungen über die Rolle von Schichtfugen und Klüften in der karsthydrographischen Entwicklung, *Geologische Rundschau*, 58(2), 395–408.
- Böhm, R., I. Auer, M. Brunetti, M. Maugeri, T. Nanni, and W. Schöner (2001), Regional temperature variability in the European Alps: 1760-1998 from homogenized instrumental time series, *International Journal of Climatology*, 21, 1779–1801, doi:10.1002/joc.689.
- Böhner, J., and F. Lehmkuhl (2005), Environmental change modelling for Central and High Asia: Pleistocene, present and future scenarios, *Boreas*, 34, 220–231, doi:10.1080/03009480510012917.
- Bolch, T., M. Buchroithner, T. Pieczonka, and A. Kunert (2008), Planimetric and volumetric glacier changes in the Khumbu Himal, Nepal, since 1962 using Corona, Landsat TM and ASTER data, *Journal of Glaciology*, 54(187), 592–600.
- Bolch, T., T. Yao, S. Kang, M. F. Buchroithner, D. Scherer, F. Maussion, E. Huintjes, and C. Schneider (2010), A glacier inventory for the western Nyainqentanglha range and the Nam Co Basin, Tibet, and glacier changes 1976-2009, *The Cryosphere*, 4, 419–433, doi:10.5194/tc-4-419-2010.
- Bolch, T., T. Pieczonka, and D. I. Benn (2011), Multi-decadal mass loss of glaciers in the Everest area (Nepal Himalaya) derived from stereo imagery, *The Cryosphere*, 5, 349–358.
- Bolch, T., et al. (2012), The state and fate of Himalayan glaciers, *Science*, 336, 310–314.
- Bolch, T., L. Sandberg Sørensen, S. B. Simonsen, N. Mölg, and H. Machguth (2013), Mass loss of Greenland’s glaciers and ice caps 2003-2008 revealed from ICESat laser altimetry data, *Geophysical Research Letters*, 40, 1–7, doi:10.1002/grl.50270.
- Boot, W., M. Van den Broeke, L. Conrads, P. Duynkerke, J. Oerlemans, M. Poranger, A. Russell, H. Snellen, and R. Van de Wal (1991), *GIMEX-91 Field Report*, 15 pp., Institute for Marine and Atmospheric Research Utrecht University.
- Bortenschlager, S. (1970), Neue Pollenanalytische Untersuchungen von Gletschereis und gletschernahen Mooren in den Ostalpen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 6(1-2), 107–118.
- Boulton, G. S. (1996), Theory of glacial erosion, transport and deposition as a consequence of subglacial sediment deformation, *Journal of Glaciology*, 42(140), 43–62.
- Bourgeois, J. C. (1985), Airborne pollen: A unique air mass tracer, its influx to the canadian high arctic, *Annals of Glaciology*, 7, 109–116.
- Bourgeois, J. C. (1990a), A modern pollen spectrum from Dye 3, South Greenland Ice Sheet, *Journal of Glaciology*, 36, 340–342.
- Bourgeois, J. C. (1990b), Seasonal and annual variation of pollen content in the snow of a canadian high arctic ice cap, *Boreas*, 19, 313–322.
- Boutron, C. F., and C. C. Patterson (1986), Lead concentration changes in Antarctic ice during the Wisconsin/Holocene transition, *Nature*, 323, 222–225.
- Boutron, C. F., C. C. Patterson, V. N. Petrov, and N. I. Barkov (1987), Preliminary data on changes of lead concentration in Antarctic ice from 155000 to 26000 years BP, *Atmospheric Environment*, 21, 1–6.

- Braithwaite, R. (2008), Temperature and precipitation climate at the equilibrium-line altitude of glaciers expressed by the degree-day factor for melting snow, *Journal of Glaciology*, 54(186), 437–444.
- Braithwaite, R., and O. B. Olesen (1988), Winter accumulation reduces summer ablation on Nordbogletscher, South Greenland, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 24(1), 21–30.
- Braithwaite, R. J. (1981), On glacier energy balance, ablation, and air temperature, *Journal of Glaciology*, 27(97), 381–391.
- Braithwaite, R. J. (1984), Can the mass balance of a glacier be estimated from its equilibrium-line altitude?, *Journal of Glaciology*, 30(106), 364–368.
- Braithwaite, R. J. (2009), After six decades of monitoring glacier mass balance we still need data but it should be richer data, *Annals of Glaciology*, 50, 221–227.
- Braithwaite, R. J., and F. Müller (1980), On the parametrization of glacier equilibrium line altitude, in *World Glacier Inventory - Inventaire mondial des Glaciers (Proceedings of the Riederalp Workshop, September 1978: Actes de l'Atelier de Riederalp, september 1978): IAHS-AIHS Publ. no. 126*.
- Braithwaite, R. J., and S. C. B. Raper (2002), Glaciers and their contribution to sea level change, *Physics and Chemistry of the Earth*, 27, 1445–1454.
- Braitmeier, M. (2003), Die Energiebilanz an der Oberfläche des Nevado Santa Isabel, Kolumbien, Ph.D. thesis, Heinrich-Heine-Universität Düsseldorf.
- Braun, A. F. (1972), Allgemeine Geologie. Klassische Methoden der Einzelkornanalyse an Lockersedimenten, *Zbl. Geol. Paläont. Teil 1*, 5/6, 257–269.
- Braun, A. F. (1973), Einfaches sedimentologisches Modell zur Gliederung der von Gletschern abgelagerten Sedimenten, *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte*, 6, 315–326.
- Braun, L. N. (1988), *Parametrization of snow- and glaciermelt*, 72 pp., Geographisches Institut ETH Zürich.
- Braun, L. N., H. Escher-Vetter, M. Siebers, and M. Weber (2007), Water balance of the highly glaciated Vernagt Basin, Ötztal Alps, *alpine space - man & environment*, 3, 33–42.
- Brink, N. W. T., and A. Weidick (1974), Greenland Ice Sheet history since the last glaciation, *Quaternary Research*, 4, 429–440.
- Browman, L. G. (1980), *Advanced concepts and techniques in the study of snow and ice resources*, chap. Channels in ice, pp. 224–234, National Academy of Sciences.
- Brown, C. S., L. A. Rasmussen, and M. F. Meier (1986), *Bed topography inferred from airborne radio-echo sounding of Columbia Glacier, Alaska*, US Geological Survey.
- Brown, R. J. E. (1963), Influence of vegetation on Permafrost, in *Permafrost International Conference November 1963*, pp. 20–25.
- Brückl, E. (1982), Ein Gletschermechanisches Modell des Untersulzbach Keeses, *Geowissenschaftliche Mitteilungen*, 21, 113–151.

- Brückl, E., and G. Gangl (1972), Die Ergebnisse der seismischen Gletschermessungen am Gefrorene Wand Kees im Jahre 1969, in *Arbeiten aus der Zentralanstalt für Meteorologie und Geodynamik*.
- Brunner, K. (1986), Grossmass-stäbige Gletscherkartierungen in den Alpen - eine Bibliographie, *Erdkunde*, 40, 63–69.
- Brunner, K. (1987), Glacier mapping in the Alps (with 3 map sheets), *Mountain Research and Development*, 7(4), 375–385.
- Brunner, K. (1988), Exakte grossmassstäbige Karten von Alpengletschern - ein Säkulum ihrer Bearbeitung, *PGM*, 2, 129–140.
- Brunner, K. (1989), Gletscherdarstellungen in topographischen Karten und Veduten, *Internationales Jahrbuch für Kartographie*, 29, 55–79.
- Burga, C. (1981), Glazialmorphologische Untersuchungen im Hinterrhein-Tal und am Bernhardin-Pass, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 126, 237–267.
- Burga, C. (1982a), Pollenanalytical research in the Grisons (Switzerland), *Vegetatio*, 49, 173–186.
- Burga, C. (1982b), Übersicht zur palynologischen Erforschung Graubündens 1929-1982, *Physische Geographie*, 1, 147–156.
- Burga, C. (1983), Sedimentologisch-chronologische Untersuchungen zum ehemaligen Schamser-See (Graubünden/Schweiz), *Jahresbericht der Naturforschenden Gesellschaft Graubünden*, 100, 135–149.
- Burga, C. (1984), Beobachtungen zum Lineargefüge des Adula-Kristallins und zum Quartär am San Bernardino-Pass (Graubünden/Schweiz), *Geographica Helvetica*, 1, 27–33.
- Burga, C. (1991), Palynologische Hinweise zu nacheiszeitlichen Klimaschwankungen in den Zentralalpen: Das mittelholozäne Wärmeoptimum, *Geographica Helvetica*, 46(4), 178–182.
- Burger, H., and R. Hantke (1982), Die Moränen der Plassegg-Hochfläche im östlichen Rätikon (Graubünden) mit sich kreuzenden Moränenwällen, *Eclogae Geologicae Helveticae*, 75(1), 93–99.
- Bürgisser, H., A. Gansser, and J. Pika (1982), Late glacial lake sediments of the Indus Valley area, Northwest Himalayas, *Eclogae Geologicae Helveticae*, 75(1), 51–63.
- Bütler, M. (2007), Die Gletscher haben keine Zeit, *Rechtsgeschichte - Legal History*, 10, 74–77, doi:10.12946/rg10/074-077.
- Cailleux, A. (1972), Bear-cub and marginate lakes and thermokarst, *Cahiers de Géographie de Québec*, 15, 131–136.
- Cammeraat, E., L. W. S. Graaff, J. K. Kwadijk, and J. Rupke (1987), On the origin of debris pillars in the alps of Vorarlberg, Westen Austria, *Geomorphologie. N. F.*, 31(1), 85–100.
- Carol, H. (1945a), Über einen Versuch, den Gletscheruntergrund mittels Einstiegs durch ein Strudeloch zu erreichen, *Die Alpen*, 6, 1–6.
- Carol, H. (1945b), Beschreibung einer Gruppe von Gletscherrandklüften am Oberen Grindelwaldgletscher (Mit Hinweisen auf die Bedeutung der Gletscherrandklüfte für die glaziologische und glazialmorphologische Forschung, *Mitteilungen der Geographisch-Ethnographischen Gesellschaft in Zürich*, 42, 12–51.

- Carol, H., and D. Aubert (1983), Erosion et morphologie glaciaire de la molasse, *Bulletin de Géologie Lausanne*, 272, 321–340.
- Carrara, P. E., and J. T. Andrews (1973), Problems and application of lichenometry to geomorphic studies, San Juan Mountains, Colorado, *Arctic and Alpine Research*, 5(4), 373–384.
- Carturan, L., C. F., and G. Dalla Fontana (2009), Enhanced estimation of glacier mass balance in unsampled areas by means of topographic data, *Annals of Glaciology*, 50, 37–46.
- Castan, G. (1980), Près des Grand Mulets, in *Gottfried Keller Stiftung 1977-1980*, pp. 60–65.
- Casty, C., H. Wanner, J. Luterbacher, J. Esper, and R. Böhm (2005), Temperature and precipitation variability in the European Alps since 1500, *International Journal of Climatology*, 25(14), 1855–1880, doi:10.1002/joc.1216.
- Catasta, G., and C. Smiraglia (1988), Primi risultati delle ricerche sul bilancio di massa al Ghiacciaio della Sforzellina (Gruppo del Cevedale, Alpi Centrali), *Geografia Fisica e Dinamica Quaternaria*, 11(1), 25–30.
- Caukwell, R. A., and S. Hastenrath (1982), Variations of Lewis Glacier, Mount Kenya, 1978-82, *Erdkunde, Archiv für wissenschaftliche Geographie*, 36, 299–304.
- Cazenave, A., K. Dominh, S. Guinehut, E. Berthier, W. Llovel, G. Ramillien, M. Ablain, and G. Larnicol (2009), Sea level budget over 2003-2008: A reevaluation from GRACE space gravimetry, satellite altimetry and Argo, *Global and Planetary Change*, 65, 83–88, doi: 10.1016/j.gloplacha.2008.10.004.
- Ceballos, J. L., C. Euscátegui, J. Ramirez, M. Canon, C. Huggel, W. Haeberli, and H. Machguth (2006), Fast shrinkage of tropical glaciers in Colombia, *Annals of Glaciology*, 43, 194–201.
- Chen, J., and M. Funk (1990), Mass balance of Rhonegletscher during 1882/83-1986/87, *Journal of Glaciology*, 36(123), 199–209.
- Chen, J., and A. Ohmura (1990), Estimation of Alpine glacier water resources and their change since the 1870s, in *Hydrology in Mountainous Regions. I. Hydrological measurement; the water cycle (Proceedings of two Lausanne Symposia, August 1990). IAHS Publ. no 193*.
- Cherrey, M. (1951), Glacier de Sarennes. Observations d'Octobre 1949 A Octobre 1950, *La Houille Blanche*.
- Chinn, T. (1994), What's happening to our glaciers?, *New Zealand Alpine Journal*, 47, 96–100.
- Chinn, T. J. (1996), New Zealand glacier responses to climate change of the past century, *New Zealand Journal of Geology and Geophysics*, 39, 415–428.
- Chinn, T. J. (2001), Distribution of the glacial water resources of New Zealand, *Journal of Hydrology*, 40, 139–187.
- Chinn, T. J. (s.a.), How much ice has been lost?, pp. 88–95.
- Citterio, M., G. Diolaiuti, C. Smiraglia, C. D'Agata, T. Carnielli, G. Stella, and G. B. Siletto (2007), The fluctuations of Italian glaciers during the last century: A contribution to knowledge about alpine glacier changes, *Geografiska Annaler*, 89 A(3), 167–184.
- Clark, M. J. (1987a), *Glacio-fluvial Sediment Transfer*, chap. The alpine sediment system: A context for glacio-fluvial processes, pp. 9–31, John Wiley & Sons Ltd.

- Clark, M. J. (1987b), *Glacio-fluvial Sediment Transfer*, chap. Geocryological inputs to the alpine sediment system, pp. 33–58, John Wiley & Sons Ltd.
- Clark, M. J. (1987c), *Glacio-fluvial Sediment Transfer*, chap. The glacio-fluvial sediment system: Applications and implications, pp. 499–516, John Wiley & Sons Ltd.
- Clarke, G. K. C., J. P. Schmok, C. Ommanney, and S. G. Collins (1986), Characteristics of surge-type glaciers, *Journal of Geophysical Research*, *91*, 1–35.
- Clarke, G. K. C., E. Berthier, C. G. Schoof, and A. H. Jarosch (2009), Neural networks applied to estimating subglacial topography and glacier volume, *Journal of Climate*, *22*, 2146–2160, doi:10.1175/2008JCLI2572.1.
- Cogley, G., J (2016), Glacier shrinkage across High Mountain Asia, *Annals of Glaciology*, *57*(71), 41–49.
- Cogley, J. G. (2009a), Geodetic and direct mass-balance measurements: comparison and joint analysis, *Annals of Glaciology*, *50*, 96–100.
- Cogley, J. G. (2009b), A more complete version of the World Glacier Inventory, *Annals of Glaciology*, *50*(53), 32–38.
- Cogley, J. G. (2010), Mass-balance terms revisited, *Journal of Glaciology*, *56*(200), 1–5.
- Cogley, J. G. (2012a), Area of the ocean, *Marine Geodesy*, *35*, 379–388, doi:10.1080/01490419.2012.709476.
- Cogley, J. G. (2012b), *The Future of the World's Climate*, chap. The future of the world's glaciers, pp. 197–222, Elsevier Science Publishers B. V., doi:10.1016/B978-0-12-386917-3.00008-7.
- Cogley, J. G., and W. P. Adams (1998), Mass balance of glaciers other than the ice sheets, *Journal of Glaciology*, *44*(147), 315–325.
- Cogley, J. G., W. P. Adam, M. A. Eccleston, F. Jung-Rothenhäusler, and C. S. L. Ommanney (1996), Mass balance of White Glacier, Axel Heiberg Island, N.W.T., Canada, 1960–61, *Journal of Glaciology*, *42*(142), 548–563.
- Colella, A., and A. Digennaro (1978), Considerazioni paleoclimatiche in base allo studio mineralogico delle argille subappennine pleistoceniche, affioranti presso Montescaglioso (Matera), *Geografia Fisica e Dinamica Quaternaria*, *1*, 119–124.
- Collazos, C. E. (2002), Incidencia de las Variaciones del brillo solar en la dinámica glaciaria del volcán Nevado Santa Isabel (Cordillera Central, Colombia), *Meteorología Colombiana*, *6*, 1–11.
- Collins, D. N. (1981), Seasonal variation of solute concentration in melt waters draining from an alpine glacier, *Annals of Glaciology*, *2*, 11–16.
- Coltorti, M., and F. Dramis (1987), Sedimentological characteristics of stratified slope-waste deposits in the Umbria-Marche Apennines (Central Italy) and their genetic implications, in *Processus et mesure de l'érosion*, pp. 145–152.
- Coltorti, M., F. Dramis, and G. Pambianchi (1983), Stratified slope-waste deposits in the Esino River Basin, Umbria-Marche Apennines, Central Italy, *Polarforschung*, *53*(2), 59–66.
- Cook, A. J., A. J. Fox, D. G. Vaughan, and J. G. Ferrigno (2005), Retreating glacier fronts on the Antarctic Peninsula over the past half-century, *Science*, *308*(5721), 541–544.

- Corte, A., and E. M. Buk (1984), El marco criogénico para la hidrología cordillerana, *Jornadas de hidrología de nieves y hielos en america del sur*, 1, 1–16.
- Corte, A. E., and D. Trombotto (1984), Quartz grain surface textures in laboratory experiments and in field conditions of rock glaciers, *Microscopia Electronica y Biología Celular*, 8(1), 71–74.
- Coûteaux, M., J. Guiot, and L. Tessier (1986), Essai de datage d'un sédiment de la dernière récurrence glaciaire par confrontation de données pollenanalytiques et dendroclimatiques.
- Cullen, N. J., T. Mölg, G. Kaser, K. Hussein, K. Steffen, and D. R. Hardy (2006), Kilimanjaro glaciers: Recent areal extent from satellite data and new interpretation of observed 20th century retreat rates, *Geophysical Research Letters*, 33, L16,502.
- Cullen, N. J., et al. (2017), An 11-year record of mass balance of brewster glacier, new zealand, determined using a geostatistical approach, *Journal of Glaciology*, 63(238), 199–217, doi:10.1017/jog.2016.128.
- Dadic, R. (2008), Monitoring and model snow accumulation processes in glacierized alpine basins, Ph.D. thesis, ETH Zürich.
- Dadic, R., J. G. Corripio, and P. Burlando (2008), Mass-balance estimates for Haut Glacier d'Arolla, Switzerland, from 2000 to 2006 using DEMs and distributed mass-balance modelling, *Annals of Glaciology*, 49, 22–26.
- Dahl, R. (1968), The retreat of the Reintind Glacier (Frostisen), *Norsk Geografisk Tidsskrift*, 22(4), 271–273.
- Damm, B. (1999), L'evoluzione dei ghiacciai, del paesaggio e del clima nei Monti di Tures (Alto Adige) dal tardiglaciale, *Geografia Fisica e Dinamica Quaternaria*, 22, 49–55.
- Dansgaard, W., S. J. Johnsen, H. B. Clausen, and C. C. Langway Jr (1971), *The late cenozoic glacial ages*, chap. Climatic record revealed by the camp century ice core, pp. 37–56, Yale University.
- De Jong, C. (1991), A reappraisal of the significance of obstacle cleasts in cluster bedform dispersal, *Earth Surface Processes and Landforms*, 16, 737–744.
- De Jong, C. (1992), Measuring changes in micro and macro roughness on mobile gravel beds, *Erosion and Sediment Transport Monitoring Programmes in River Basins (Proceedings of the Oslo Symposium, August 1992)*, 210, 31–40.
- De Quervain, A., and E. Schnitter (1920), Das Zungenbecken des Bifertengletschers, *Denkschriften der Schweizerischen Naturforschenden Gesellschaft*, 55, 137–149.
- Deichman, N., and M. Baer (1990), Earthquake focal depths below the Alps and the Northern Alpine Foreland of Switzerland, in *The European Geotraverse: Integrative Studies*, pp. 277–288.
- Deichman, N., and D. Mayer-Rosa (1980), A case of thermally-induced microseismic activity at a storage reservoir in Switzerland, *Rock Mechanics*, 10, 77–82.
- Delisle, G., T. Chinn, W. Karlen, and P. Winters (1985), Radio echo-sounding of Erebus glacier tongue, 1-50 pp.
- Demuth, M., V. Pinard, A. Pietroniro, B. Liuckman, C. Hopkinson, P. Dornes, and L. Comeau (2008), Recent and past-century variations in the glacier resources of the Canadian Rocky Mountains: Nelson River system, *Terra Glacialis*, pp. 27–52.

- Demuth, M. N. (1996), The Canadian glacier variations monitoring and assessment network: status and future perspectives, *National Hydrology Research Institute Contribution Series*, p. 9.
- Demuth, M. N. (1997), A discussion of "Challenges facing surface water monitoring in Canada" by P.J. Pilon, T.J. Day, T.R. Yuzyk and R.A. Hale, Canadian water resources journal, Vol. 21, No.2, 1996, *Canadian Water Resources Journal*, 22, 89–93.
- Demuth, M. N. (1998), *Canadian snow and ice studies, 1994-1995*, 13 pp., International Glaciological Society, (copy).
- Demuth, M. N. (s. a.), The delivery of a federal glacier science programme by NRCan and DOE: Supplemental Information, *National Hydrology Research Institute*.
- Demuth, M. N., and S. Munro (1995), Break-out session: review of glacier related activities in Canada, *National Hydrology Research Institute Contribution*, p. 4 pp.
- Demuth, M. N., S. Adam, and A. Pietroniro (1997), *Glacier monitoring using Radarsat*, National Hydrology Research Institute NHRI.
- Denoth, A., W. Seidenbusch, M. Blumthaler, P. Kirchlechner, W. Ambach, and S. C. Colbeck (1979), Study of water drainage from columns of snow, 1-14 pp.
- Doell, R. R. (1962), Seismic depth study of the Salmon Glacier, British Columbia, *Journal of Glaciology*, 4(34), 425–437.
- Dozy, J. J. (1938), Eine Gletscherwelt in Niederländisch-Neuguinea, *Zeitschrift für Gletscherkunde*, 26, 45–51 (Separatum).
- Dramis, F., and M. Sorriso-Valvo (1994), Deep-seated gravitational slope deformations, related landslides and tectonics, *Engineering Geology*, 38, 231–243.
- Duchesne, F., and A. Pissart (1985), Valeur statistique des comptages de cailloux de différentes lithologies. Applications aux alluvions actuelles de l'Ourthe, *Bulletin de la Société Géographique de Liège*, 21, 13–23.
- Dutto, F., and G. Mortara (1991), Rischi connessi con la dinamica glaciale nell'arco alpino italiano, p. 2 pp, abstract.
- Dyrgerov, M. B. (1999), Analysis of winter and summer glacier mass balances, *Geografiska Annaler*, 81 A, 541–554.
- Dyrgerov, M. B., and D. B. Bahr (1999), Correlations between glacier properties: finding appropriate parameters for global glacier monitoring, *Journal of Glaciology*, 45(149), 9–16.
- Dyrgerov, M. B., and J. Dwyer (2000), The steepening of glacier mass balance gradients with northern hemisphere warming, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 36, 107–118.
- Dyrgerov, M. B., and G. J. McCabe (2006), Associations between accelerated glacier mass wastage and increased summer temperature in coastal regions, *Arctic, Antarctic and Alpine Research*, 38(2), 190–197.
- Dyrgerov, M. B., and M. F. Meier (1997), Year-to-year fluctuations of global mass balance of small glaciers and their contribution to sea-level changes, *Arctic and Alpine Research*, 29(4), 392–402.

- Dyurgerov, M. B., and M. F. Meier (2000), Twentieth century climate change: Evidence from small glaciers, *PNAS*, *97*(4), 1406–1411.
- Dyurgerov, M. B., M. F. Meier, and D. B. Bahr (2009), A new index of glacier area change: a tool for glacier monitoring, *Journal of Glaciology*, *55*(192), 710–716, doi:10.3189/002214309789471030.
- Echelmeyer, K. (1987), Some observations on a recent surge of Peters glacier, Alaska, U.S.A., *Journal of Glaciology*, *33*, 5 pp (Separatum).
- Eicher, U., and U. Siegenthaler (1976), Palynological and oxygen isotope investigation on late glacial sediment cores from Swiss lakes, *Boreas*, *5*, 109–117.
- Eisen, O., U. Nixdorf, L. Keck, and D. Wagenbach (2003), Alpine ice cores and ground penetrating radar: combined investigations for glaciological and climatic interpretation of a cold Alpine ice body, *Tellus*, *55B*, 1007–1017.
- Eisner, H., and W. Ambach (1981), Strain rate measurements in a 20m deep firn pit in a temperate glacier (Kesselwandferner, Oetztal Alps, 1967-1978, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *17*(5), 169–176.
- Eisner, H., and W. Ambach (1988), Radioaktive Ablagerungen im Gletscherfirn, *Österreichischer Alpenverein Mitteilungen*, *43*(113), 12–13.
- Eisner, H., W. Ambach, H. Schneider, and P. Kirchlechner (1982), Niveauschwankungen der Wassertafel im Akkumulationsgebiet eines temperierten Gletschers während eines hydrologischen Jahres, *Österreichische Wasserwirtschaft*, *34*(7/8), 174–177.
- Eisner, H., W. Ambach, and H. Schneider (1984a), Time dependent tilt of a 20m deep firn pit, *Polarforschung*, *50*, 85–93.
- Eisner, H., W. Ambach, and H. Schneider (1984b), Evaluation of strain rate measurements on a 20m deep firn pit, applying a newtonian model (Kesselwandferner, Ötztal Alps, 1967-1978, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *20*, 169–176.
- Elsasser, H. (1967), Untersuchungen an Strukturböden im Kanton Graubünden, Ph.D. thesis, Universität Zürich.
- Elsberg, D. H., W. D. Harrison, K. A. Echelmeyer, and R. M. Krimmel (2001), Quantifying the effects of climate and surface change on glacier mass balance, *Journal of Glaciology*, *47*(159), 649–658.
- Elvehøy, H., M. Jackson, and L. M. Andreassen (2009), The influence of drainage boundaries on specific mass-balance results: a case study of Engabreen, Norway, *Annals of Glaciology*, *50*, 135–140.
- Embleton, C. (1988), A comparison of cirque forms between the Austrian Alps and the Highlands of Britain, *Geomorphologie. N. F.*, *70*, 75–93.
- Engelhardt, H. (1987), Wenn gletscher plötzlich schnell werden: Bohrlochmessungen klären die einen surge auslösenden mechanismus auf, *Geowissenschaften in unserer Zeit*, *5*(6), 213–220, Organ der Alfred-Wegener-Stiftung.
- Ergenzinger, P. (1992), Riverbed adjustments in a step-pool system: Lainbach, Upper Bavaria, in *Dynamics of Gravel Bed Rivers*, pp. 416–430.

- Ergenzinger, P., and C. De Jong (1994), Interrelationships between bedload transfer and river-bed adjustment in mountain river: An example from Squaw Creek, Montana, in *Process Models and Theoretical Geomorphology*, pp. 141–158.
- Ergenzinger, P., C. De Jong, J. Laronne, and I. Reid (1994), Short term temporal variations in bedload transport rates: Squaw Creek, Montana, USA and Nahal Yatir and Nahal Estemoa, Israel, *Lecture Notes in Earth Sciences*, 52, 251–264.
- Erismann, T., H. Heuberger, and E. Preuss (1977), Der Bimsstein von Köfels (Tirol), ein Bergsturz-“Friktionit”, *Tschermarks Mineralogische und Petrographische Mitteilungen*, 24, 67–119.
- Escher-Vetter, H., M. Kuhn, and M. Weber (2009), Four decades of winter mass balance of Vernag/Vernagt and Hintereisferner, Austria: methodology and results, *Annals of Glaciology*, 50, 87–95.
- Espizua, L. E., and J. D. Bengochea (1990), Surge of Grande del Nevado glacier (Mendoza, Argentina) in 1984: Its evolution through satellite images, *Geografiska Annaler*, 72A, 255–259.
- Etzelmüller, B., and J. L. Sollid (1996), Long-term mass balance of selected polythermal glaciers on Spitsbergen, Svalbard, *Norsk Geografisk Tidsskrift*, 50, 55–66.
- Etzelmüller, B., and J. L. Sollid (1997), Glacier geomorphometry - an approach for analyzing long-term glacier surface changes using grid-based digital elevation models, *Annals of Glaciology*, 24, 135–141.
- Etzelmüller, B., J. O. Hagen, G. Vatne, R. S. Ødegård, and J. L. Sollid (1996), Glacier debris accumulation and sediment deformation influenced by permafrost: examples from Svalbard, *Annals of Glaciology*, 22, 53–62.
- Eugster, H. (1973), Bericht über die Untersuchungen des Blockstroms in der Val Sassa im Schweiz. Nationalpark (GR) von 1917-1971, *Ergebnisse der wissenschaftlichen Untersuchungen im Schweizerischen Nationalpark*, 11, 368–384.
- Evans, I. S. (2006), Glacier distribution in the Alps: Statistical modelling of altitude and aspect, *Geografiska Annaler*, 88 A, 115–133.
- Evans, S. G., and J. J. Clague (1988), Catastrophic rock avalanches in glacial environments, *Proceedings of the 5th International Symposium on Landslides*, 2, 1153–1158.
- Evin, M. (1982), Présence et signification morphoclimatique des sédiments gelés a l’amont des glaciers rocheux.
- Evin, M. (1986), Relations entre le mouvement des glaciers rocheux et l’orientation des blocs disposés á leur surface. Un exemple valaisan., in *Communication à la S.H.F.*
- Evin, M. (1991/1992a), Glacier et glaciers rocheux dans les vallons de Mongioie et de Schiantala, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 27/28, 1–10.
- Evin, M. (1991/1992b), Une moraine de refoulement au Viso (Italie), *Zeitschrift für Gletscherkunde und Glazialgeologie*, 27/28, 11–24.
- Evin, M., and J. L. Beaulieu (1985), Nouvelles données sur l’âge de la mise en place et les phases d’activité du glacier rocheux de Marinnet I (Haute-Ubaye, Alpes du Sud françaises), 1-15 pp.
- Evin, M., and D. Fabre (1990), The distribution of permafrost in rock glaciers of the Southern Alps (France), *Geomorphology*, 3, 57–71.

- Eybergen, F. A. (1966), Glacier snout dynamics and contemporary push moraine formation at the Turtmannglacier, Wallis, Switzerland, in *Tills and Glacitectonics*.
- Faeh, R., E. Koella, and F. Naef (1990), The flood in the Reuss valley in August 1987: A computer aided reconstruction of a flood in a mountainous region, in *International Conference on River Flood Hydraulics*, pp. 65–74.
- Farinotti, D., M. Huss, A. Bauder, M. Funk, and M. Truffer (2008), A method to estimate ice volume and ice thickness distribution of alpine glaciers, *Journal of Glaciology*, 55(191), 422–430, doi:10.3189/002214309788816759.
- Farinotti, D., M. Huss, J. Fürst, Johannes, J. Landmann, H. Machguth, F. Maussion, and A. Pandit (2019), A consensus estimate for the ice thickness distribution of all glaciers on Earth, *Nature Geoscience*, p. 1.
- Fenn, C. R., and A. M. Gurnell (1987), *Glacio-fluvial Sediment Transfer*, chap. Proglacial channel process, pp. 423–472, John Wiley & Sons Ltd.
- Ficker, E., G. Sonntag, and E. Weber (1980), Ansätze zur mechanischen Deutung der Rissentstehung bei Parabelrissen und Sichelbrüchen auf glazial geformten Felsoberflächen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 16, 25–43.
- Finckh, P., and K. Kelts (1976), Geophysical investigations into the nature of pre-holocene sediment of Lake Zurich, *Eclogae Geologicae Helveticae*, 69, 139–148.
- Finger, D., F. Pellicciotti, M. Konz, S. Rimkus, and P. Burlando (2011), The value of glacier mass balance, satellite snow cover images, and hourly discharge for improving the performance of a physically based distributed hydrological model, *Water Resources Research*, 47, W07,519, doi:10.1029/2010WR009824.
- Finger, D., G. Heinrich, A. Gobiet, and A. Bauder (2012), Projections of future water resources and their uncertainty in a glacierized catchment in the Swiss Alps and the subsequent effects on hydropower production during the 21st century, *Water Resources Research*, 48, W02,521, doi:10.1029/2011WR010733.
- Finsterwalder, R. (1954), Photogrammetry and glacier research with special reference to glacier retreat in the Eastern Alps, *Journal of Glaciology*, 2(3), 306–315.
- Finsterwalder, S. (1907), Die Theorie der Gletscherschwankungen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 2, 81–103.
- Fisch Sen, W., W. Fisch Jun, and W. Haeberli (1977), Electrical D. C. resistivity soundings with longprofiles on rock glaciers and moraines in the Alps of Switzerland, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 13(1/2), 239–260.
- Fischer, A. (2009), Calculation of glacier volume from sparse ice-thickness data, applied to Schaufelferner, Austria, *Journal of Glaciology*, 55(191), 453–460.
- Fischer, A., B. Seiser, M. Stocker Waldhuber, C. Mitterer, and J. Abermann (2015), Tracing glacier changes in Austria from the Little Ice Age to the present using a lidar-based high-resolution glacier inventory in Austria, *The Cryosphere*, 9(2), 753–766, doi:10.5194/tc-9-753-2015.
- Fischer, G., P. A. Schnegg, J. Ma, and M. Burkhard (1987), Etude VLF-R du remplissage quaternaire de la Vallée de Gastern (Alpes Bernoises, Suisse), *Eclogae Geologicae Helveticae*, 80, 773–787.

- Fischer, L., A. Kääh, C. Huggel, and J. Noetzli (2006), Geology, glacier retreat and permafrost degradation as controlling factors of slope instabilities in a high-mountain rock wall: the Monte Rosa east face, *Natural Hazards and Earth System Sciences*, 6, 761–772.
- Fisher, J. E. (1952), The cold ice tunnel on the Silbersattel, Monte Rosa. Preliminary report, *Journal of Glaciology*, 2, 193–196.
- Fisher, J. E. (1962), Two tunnels in cold ice at 4000 m. on the Breithorn, *Journal of Glaciology*, 4(35), 513–520.
- Fitze, P. (1973), Erste Ergebnisse neuerer Untersuchungen des Klettgauer Löss, *Geographica Helvetica*, 2, 96–102.
- Fitze, P. F. (1982), Zur Relativdatierung von Moränen aus der Sicht der Bodenentwicklung in den kristallinen Zentralalpen, *Catena*, 9(3/4), 265–306.
- Fitzharris, B., W. J. Lawson, and I. Owens (1999), Research on glaciers and snow in New Zealand, *Progress in Physical Geography*, 23(4), 469–500.
- Fliri, F. (1967), Beiträge zur Kenntnis der zeitlichen und räumlichen Verteilung des Niederschlags in den Alpen in der Periode 1931-1960, in 9. *Internationale Tagung für alpine Meteorologie in Brig und Zermatt 14-17. Sept. 1966*, vol. 4, pp. 72–79.
- Fliri, F. (1971), Neue klimatologische Querprofile der Alpen - ein Energiehaushalt, *Annalen der Meteorologie*, 5, 93–97.
- Fliri, F., H. Hilscher, and V. Markgraf (1971), Weitere Untersuchungen zur Chronologie der alpinen Vereisung (Bänderton von Baumkirchen, Inntal, Nordtirol, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 7(1-2), 5–38.
- Fontana, F. M. A., A. P. Trishchenko, Y. Luo, K. V. Khlopenkov, S. U. Nussbaumer, and S. Wunderle (2010), Perennial snow and ice variations (2000-2008) in the Arctic circumpolar land area from satellite observations, *Journal of Geophysical Research*, 115, F04,020, doi: 10.1029/2010JF001664.
- Foster, H. L., and G. W. Holmes (1965), A large transitional rock glacier in the Johnson River Area, Alaska Range, in *Geological Survey Research*, pp. 112–116.
- Fountain, A. G., M. J. Hoffman, F. Granshaw, and J. Riedel (2009), The 'benchmark glacier' concept - does it work? Lessons from the North Cascade Range, USA, *Annals of Glaciology*, 50, 163–168.
- Fox, K. F., C. D. Rinehart, and J. C. Engels (1977), Plutonism and orogeny in north-central Washington - Timing and regional context, *Geological Survey Professional Paper*, 989, 1–27.
- Francou, B. (1983), Géodynamique des dépôts de pied de paroi dans l'étage périglaciaire, *Revue de Géologie dynamique et de géographie physique*, 24, 411–424.
- Francou, B., M. Vuille, P. Wagnon, J. Mendoza, and J. Sicart (2003), Tropical climate change recorded by a glacier in the central Andes during the last decades of the twentieth century: Chacaltaya, Bolivia, 16°S, *Journal of Geophysical Research*, 108(D5), 4145, doi:10.1029/2002JD002959.
- Frech, F. (1901), Über glaciale Druck- und Faltungerscheinungen im Oder-Gebiet, *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*, 36(5), 219–229.

- Frey, H., and F. Paul (2011), On the suitability of the SRTM DEM and ASTER GDEM for the compilation of topographic parameters in glacier inventories, *International Journal of Applied Earth Observation and Geoinformation*, 18, 480–490, doi:10.1016/j.jag.2011.09.020.
- Fugger, E. (1894), Eishöhlen und Windröhren, *Mitteilungen der Geographischen Gesellschaft in Wien*, 37, 99–134.
- Fujii, W., and K. Higuchi (1977), Statistical analyses of the forms of the glaciers in the Khumbu Himal, *Seppyo*, 39, 7–14.
- Fujii, Y. (1976), Field experiment on glacier ablation under a layer of debris cover, *Seppyo*, 39, 20–21.
- Fujii, Y., M. Nakawo, and M. L. Shrestha (1976), Mass balance studies of the glaciers in Hidden Valley, Mukut Himal, *Sepp*, 38, 17–21.
- Fujita, K., L. G. Thompson, Y. Ageta, T. Yasunari, Y. Kajikawa, A. Sakai, and N. Takeuchi (2006), Thirty-year history of glacier melting in the Nepal Himalayas, *Journal of Geophysical Research*, 111, D03,109, doi:10.1029/2005JD005894.
- Funk, M., R. Morelli, and W. Stahel (1997), Mass balance of Griesgletscher 1961-1994: Different methods of determination, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 33(1), 41–56.
- Furrer, G., H. Leuzinger, and K. Ammann (1975), Klimaschwankungen während des alpinen Postglazials im Spiegel fossiler Böden, *Vierteljahrsschrift der Naturforschenden Gesellschaft Zürich*, 120, 15–31.
- Galbas, P. U. (1980), Die glaziale Stauchung in den Ankumer Bergen bei Berge, Kr. Osnabrück.
- Gamper, M. (1987), Mikroklima und Solifluktion: Resultate von Messungen im Schweizerischen Nationalpark in den Jahren 1975-1985, *Göttinger Geographische Abhandlungen*, 84(31), 31–44.
- Gansser, A. (1970), Lunana. The peaks, glaciers and lakes of northern Bhutan, in *The Mountain World 1968/1969*.
- Gardelle, J., E. Berthier, and Y. Arnaud (2012), Slight mass gain of Karakoram glaciers in the early twenty-first century, *Nature Geoscience*, 5, 322–325, doi:10.1038/ngeo1450.
- Gardner, A. S., G. Moholdt, B. Wouters, G. J. Wolken, D. O. Burgess, M. J. Sharp, J. G. Cogley, C. Braun, and C. Labine (2011), Sharply increased mass loss from glaciers and ice caps in the Canadian Arctic Archipelago, *Nature*, 473(7347), 357–360.
- Gardner, J. S. (1986), Snow as a resource and hazard in early-twentieth-century mining, Selkirk Mountains, British-Columbia, *The Canadian Geographer*, 30(3), 217–228.
- Garleff, K., and H. Stingl (1983), Hangformen und Hangformung in der periglazialen Höhenstufe der argentinischen Anden zwischen 27° und 55° südlicher Breite, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, 35, 425–434.
- Garleff, K., and H. Stingl (1984), Jungquartäre Klimageschichte und ihre Indikatoren in Südamerika, *Zbl. Geol. Paläont. Teil 1*, 11/12, 1769–1775.
- Garleff, K., H. Stingl, and K. Lambert (1983), Fussflächen- und Terrassentreppen im Einzugsbereich des oberen Río Neuquén, Argentinien, *Geomorphologie. N. F.*, 48, 247–259.

- Garnier, B. J., and A. Ohmura (1970), The evaluation of surface variations in solar radiation income, *Solar Energy*, *13*, 21–34.
- Geist, T. (2005), Application of airborne laser scanner technology in glacier research, Ph.D. thesis, University of Innsbruck. Faculty of Geo- and Atmospheric Sciences.
- Georges, C. (2004), 20th-century glacier fluctuations in the tropical Cordillera Blanca, Perú, *Arctic, Antarctic and Alpine Research*, *36*(1), 100–107.
- Gerber, E. (1957), Das Längsprofil der Alpenländer und die Steilenwanderungstheorie, in *Geomorphologische Studien, Machatscheck-Festschrift*.
- Gerecke, F. (1932), Seismische Untersuchungen des Geophysikalischen Institutes in Göttingen. Messungen auf dem Rhôneletscher, *Zeitschrift für Geophysik*, *8*(1/2), 65–84.
- German, R. (1979), Beobachtungen am Dauerfrostboden Nordkanadas (Zur Deutung quartärer Sedimente und Formen XIII), *Gesellschaft für Naturkunde Württemberg*, *134*, 104–110.
- German, R., and M. Mader (1976), Die Äussere Jungendmoräne bei Bad Waldsee und das Riedtal, *Gesellschaft für Naturkunde Württemberg*, *131*, 39–49.
- German, R., R. Hantke, and M. Mader (1979), Der subrezente Drumlin im Zungenbecken des Biferten-Gletschers (Kanton Glarus, Schweiz) (Zur Deutung quartärer Sedimente und Formen XII), *Gesellschaft für Naturkunde Württemberg*, *134*, 96–103.
- Giardino, J. R., and J. D. Vitek (1985), A statistical interpretation of the fabric of a rock glacier, *Arctic and Alpine Research*, *17*(2), 165–177.
- Giardino, J. R., and J. D. Vitek (1988), The significance of rock glaciers in the glacial-periglacial landscape continuum, *Journal of Quaternary Science*, *3*, 97–103.
- Ginot, P., C. Kull, U. Schotterer, M. Schwikowski, and H. W. Gäggeler (2006), Glacier mass balance reconstruction by sublimation induced enrichment of chemical species on Cerro Tapado (Chilean Andes), *Climate of the Past*, *2*, 21–30.
- Glasser, N. F., S. Harrison, K. N. Jansson, K. Anderson, and A. Cowley (2011), Global sea-level contribution from the Patagonian Icefield since the Little Ice Age maximum, *Nature Geoscience*, *4*, 303–307.
- Glen, J. W. (1967), The physics of the flow of glaciers, *Physics Bulletin*, *18*(5), 135.
- Graf, K. (1981), Zum Höhenverlauf der Subnivalstufe in den tropischen Anden, insbesondere in Bolivien und Ecuador, *Geomorphologie. N. F.*, *37*, 1–24.
- Grant, U. S., and D. F. Higgins (1911), Glaciers of Prince William Sound and the Southern Part of the Kenai Peninsula, Alaska, *Bulletin of the American Geographical Society*, *43*(10), 721–800.
- Grebner, D. (1980), Starkregensituation vom 7./8. August 1978 im Schweizer Alpenraum; Entwicklung, Bewertung und Vorhersagbarkeit, in *Interprävent 1980*.
- Greene, A. M. (2005), A time constant for hemispheric glacier mass balance, *Journal of Glaciology*, *51*(174), 353–362.
- Greene, A. M., W. S. Broecker, and D. Rind (1999), Swiss glacier recession since the Little Ice Age: Reconciliation with climate records, *Geophysical Research Letters*, *26*(13), 1909–1912.

- Greuell, W. (2001), Variations with elevation in the surface energy balance on the Pasterze (Austria), *Journal of Geophysical Research*, *106*(D23), 31,717–31,727.
- Greuell, W., and W. H. Knap (1997), Elevation changes in meteorological variables along a mid-latitude glacier during summer, *Journal of Geophysical Research*, *102*(D22), 25,941–25,954.
- Greuell, W., and T. Konzelmann (1994), Numerical modelling of the energy balance and the englacial temperature of the Greenland Ice Sheet. Calculations for the ETH-Camp location (West Greenland, 1155 m a.s.l., *Global and Planetary Change*, *9*, 91–114.
- Greuell, W., and J. Oerlemans (1985), Sensitivity studies with a mass balance model including temperature profile calculations inside the glacier, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *22*(2), 101–124.
- Gross, G., H. Kerschner, and G. Patzelt (1976), Methodische Untersuchungen über die Schneegrenze in alpinen Gletschergebieten, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *12*, 223–251.
- Guarnizo, L. F., and J. Ramirez (1991), Control de ablación de un relicto de glaciar en el volcan Nevado de Ruiz, *Observatorio vulcanológico de Colombia*, p. 27.
- Gubler, E., H.-G. Kahle, S. Mueller, and R. Olivier (1981), Recent crustal movements in Switzerland and their geophysical interpretation, *Tectonophysics*, *71*, 125–152.
- Gubler, H. U. (1974), On the Rammsonde hardness equation, in *Syposium at Grindelwald 1974 - Snow Mechanics*.
- Gudmundsson, S., H. Hannesdóttir, and H. Björnsson (2012), Post-Little Ice Age volume loss of Kotárjökull glacier, SE-Iceland, derived from historical photography, *Jökull*, *62*, 97–110.
- Guglielmin, M. (1991), I rock glaciers del Passo del Foscagno (Livigno, Sondrio, *Natura Bresciana*, *26*, 35–47.
- Gundestrup, N. S. (1984), Bore-hole survey at Dye 3, South Greenland, *Journal of Glaciology*, *30*(106), 282–288.
- Gurnell, A. M. (1982), The dynamics of suspended sediment concentration in an Alpine pro-glacial stream network, in *Hydrological aspects of alpine and high mountain areas (Proceedings of the Exeter Symposium, July 1982)*.
- Gurnell, A. M. (1987a), *Glacio-fluvial Sediment Transfer*, chap. Introduction, pp. 3–8, John Wiley & Sons Ltd.
- Gurnell, A. M. (1987b), *Glacio-fluvial Sediment Transfer*, chap. Suspended Sediment, pp. 305–354, John Wiley & Sons Ltd.
- Gurnell, A. M. (1987c), *Glacio-fluvial Sediment Transfer*, chap. Fluvial sediment yield from alpine, glacierized catchments, pp. 415–420, John Wiley & Sons Ltd.
- Habbe, K. A. (1988), Was kann eine geomorphologische Vollkartierung für die Stratigraphie des Quartärs leisten?, *Berliner Geographische Abhandlungen*, *47*, 177–196.
- Habbe, K. A., and K. Rögner (1989), The pleistocene Iller Glaciers and their outwash fields, *Catena Supplement*, *15*, 311–328.

- Haeberli, W. (1973), Die Basis-Temperatur der winterlichen Schneedecke als möglicher Indikator für die Verbreitung von Permafrost in den Alpen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 9(1-2), 221–227.
- Haeberli, W. (1976), Eistemperaturen in den Alpen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 11(11), 203–220.
- Haeberli, W. (1980), Morphodynamische Aspekte aktueller Gletscherhochwasser in den Schweizer Alpen, *Basler Geographische Hefte*, 20, separatdruck.
- Haeberli, W. (1981), Ice motion on deformable sediments, *Journal of Glaciology*, 27(96), 365–366.
- Haeberli, W. (1983a), Permafrost-glacier relationships in the Swiss Alps - Today and in the past, in *Fourth International Conference on Permafrost, Fairbanks 1983*.
- Haeberli, W. (1983b), Permafrost-glacier relationships in the Swiss Alps - Today and in the past, in *Permafrost, Fourth International Conference, Fairbanks, Alaska, July 17-22, 1983*.
- Haeberli, W. (1986), Factors influencing the distribution of rocky and sedimentary glacier beds, *Mitteilungen der Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie*, 90, 48–49.
- Haeberli, W. (1994a), *Mountain Environments in Changing Climates*, chap. Accelerated glacier and permafrost changes in the Alps, pp. 91–107, Routledge.
- Haeberli, W. (1994b), Schwund der Alpengletscher und globaler Treibhauseffekt, *Die Alpen*, 4, 174–177.
- Haeberli, W. (1995), Glacier fluctuations and climate change detection - operational elements of a worldwide monitoring strategy, *WMO Bulletin*, 44, 23–31.
- Haeberli, W. (1996), On the morphodynamics of ice/debris-transport systems in cold mountain areas, *Norsk Geografisk Tidsskrift*, 50, 3–9.
- Haeberli, W. (2004a), Glaciers and ice caps: historical background and strategies of world-wide monitoring, in *Mass balance of the cryosphere*, pp. 559–578, Cambridge University Press, Cambridge, UK.
- Haeberli, W. (2004b), *Mass balance of the cryosphere*, chap. Glaciers and ice caps: historical background and strategies of world-wide monitoring, pp. 559–578, Cambridge University Press.
- Haeberli, W., and C. R. Burn (2002), *Environmental change and geomorphic hazards in forests*, chap. Natural hazards in forests: Glacier and permafrost effects as related to climate change, pp. 167–202, CABI Publishing, Wallingford/New York.
- Haeberli, W., and W. Fisch (1984), Electrical resistivity soundings of glacier beds: A test study on Grubengletscher, Wallis, Swiss Alps, *Journal of Glaciology*, 30(106), 373–376.
- Haeberli, W., and H. Holzhauser (2003), Alpine glacier mass changes during the past two millenia, *Pages News*, 11, 13–15.
- Haeberli, W., and G. Patzelt (1982), Permafrostkartierung im Gebiet der Hochebenkar-Blockgletscher, Obergurgl, Ötztaler Alpen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 18(2), 127–150.
- Haeberli, W., and F. Paul (2008), Spatial variability of glacier elevation changes in the Swiss Alps obtained from two digital elevation models, *Geophysical Research Letters*, 35, L21,502, doi:10.1029/2008GL034718.

- Haerberli, W., and U. Penz (1985a), An attempt to reconstruct glaciological and climatological characteristics of 18 ka BP ice age glaciers in an around the Swiss Alps, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *21*, 351–361.
- Haerberli, W., and U. Penz (1985b), An attempt to reconstruct glaciological and climatological characteristics of 18 KA BP ice age glaciers in and around the Swiss Alps, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *21*, 351–361.
- Haerberli, W., and H. Röthlisberger (1975), Beobachtungen zum Mechanismus und zu den Auswirkungen von Kalbungen am Gruebengletscher (Saastal, Schweiz), *Zeitschrift für Gletscherkunde und Glazialgeologie*, *11*(2), 221–228.
- Haerberli, W., and C. Schlüchter (1987), Geological evidence to constrain modelling of the Late Pleistocene Rhonegletscher (Switzerland), in *The Physical Basis of Ice Sheet Modelling (Proceedings of the Vancouver Symposium, August 1987)*, pp. 333–345, IAHS.
- Haerberli, W., and J. Schweizer (1988), Rhonegletscher 18650: Eismechanische Ueberlegungen zu einem historischen Gletscherstand, *Mitteilungen der Versuchsanstalt für Wasserbau und Erdbau, ETHZ*, *94*, 59–69.
- Haerberli, W., and H. J. Zumbühl (2003), *Welt der Alpen - Gebirge der Welt*, chap. Schwankungen der Alpengletscher im Wandel von Klima und Perzeption, pp. 77–92, Haupt.
- Haerberli, W., L. King, and A. Flotron (1979), Surface movement and lichen-cover studies at the active rock glacier near the Grubengletscher, Wallis, Swiss Alps, *Arctic and Alpine Research*, *11*(4), 421–441.
- Haerberli, W., W. Rellstab, and W. D. Harrison (1984), Geothermal effects of 18 ka BP ice conditions in the Swiss Plateau, *Annals of Glaciology*, *5*, 56–60.
- Haerberli, W., P. Müller, J. Alean, and H. Bösch (1989), *Glacier fluctuations and climatic change. Proceedings of the symposium on glacier fluctuations and climatic change, held in Amsterdam, 1-5 June 1987*, chap. Glacier changes following the Little Ice Age - A survey of the international data basis and its perspectives, pp. 77–101, Kluwer Academics Publishers.
- Haerberli, W., R. Frauenfelder, M. Hoelzle, and M. Maisch (1999), On rates and acceleration trends of global glacier mass changes, *Geografiska Annaler*, *81*, 585–591.
- Haerberli, W., J. Cihlar, and R. G. Barry (2000), Glacier monitoring within the Global Climate Observing System, *Annals of Glaciology*, *31*, 241–246, doi:10.3189/172756400781820192.
- Haerberli, W., A. Kääb, D. Vonder Mühl, and P. Teyssie (2001), Prevention of outburst flood from periglacial lakes at Grubengletscher, Valais, Swiss Alps, *Journal of Glaciology*, *47*(156), 111–122.
- Haerberli, W., M. Maisch, and F. Paul (2002a), Mountain glaciers in global climate-related observation networks, *Annals of Glaciology*, *51*(1), 18–25.
- Haerberli, W., M. Maisch, and F. Paul (2002b), Mountain glaciers in global climate-related observation networks, *World Meteorological Organization Bulletin*, *51*, 10.
- Haerberli, W., R. Frauenfelder, A. Kääb, and S. Wagner (2004a), Characteristics and potential climatic significance of "miniature ice caps" (crest- and cornice-type low-altitude ice archives), *Journal of Glaciology*, *50*(168), 129–136.

- Haeblerli, W., C. Hugger, A. Kääh, S. Zraggen-Oswald, A. Polkvoj, I. Galuskhin, I. Zotikov, and N. Osokin (2004b), The Kolka-Karmadon rock/ice slide of 20 September 2002: an extraordinary event of historical dimensions in North Ossetia, Russian Caucasus, *Journal of Glaciology*, *50*(171), 533–546.
- Haeblerli, W., et al. (2006), Permafrost creep and rock glacier dynamics, *Permafrost and periglacial processes*, *17*, 189–214.
- Haeblerli, W., M. Hoelzle, F. Paul, and M. Zemp (2007), Integrated monitoring of mountain glaciers as key indicator of global climate change: the European Alps, *Annals of Glaciology*, *46*, 150–160.
- Haefeli, R. (1942), Spannungs- und Plastizitätserscheinungen der Schneedecke unter besonderer Berücksichtigung der Schneedruckberechnung und verwandter Probleme der Erdbauforschung, *Schweizer Archiv für angewandte Wissenschaft und Technik*, *8*(9-12), 1–46.
- Haefeli, R. (1954), Kriechprobleme im Boden, Schnee und Eis, *Wasser- und Energiewirtschaft*, *30*, 3–19.
- Haefeli, R. (1960), Zur Entwicklung der Schnee- und Gletscherforschung, *Wasser- und Energiewirtschaft*, *8*, 1–10.
- Haefeli, R., and P. Kasser (1952), Glaziale Beobachtungen am Grossen Aletschgletscher, *Schweizerische Bauzeitung*, *70*(35), 1–3.
- Hagen, J. O. (1987), Glacier surge at Usherbreen, Svalbard, *Polar Research*, *5*, 239–252.
- Hagen, J. O., and O. Liestøl (1990), Long-term glacier mass-balance investigations in Svalbard, 1950-88, *International Glaciological Society*, *14*, 102–106.
- Hall, M. H. P., and D. B. Fagre (2003), Modeled climate-induced glacier change in Glacier National Park, 1850-2100, *BioScience*, *53*(2), 131–140.
- Hallet, B. (1975), Subglacial silica deposits, *Nature*, *254*(5502), 682–683.
- Hallet, B. (1976a), Deposits formed by subglacial precipitation of CaCO₃, *Geological Society of America Bulletin*, *87*, 1003–1015.
- Hallet, B. (1976b), The effect of subglacial chemical processes on glacier sliding, *Journal of Glaciology*, *17*, 209–221.
- Hallet, B., R. Lorrain, and R. Souchez (1978), The composition of basal ice from a glacier sliding over limestones, *Geological Society of America Bulletin*, *89*, 314–320.
- Hambrey, M. J., and K. Swett (1982), Rock glaciers in Northern Spitsbergen: A reply, *Journal of Geology*, *90*, 214–218.
- Hamès, V., J. Lautridou, A. Ozer, and A. Pissart (1987), Variations dilatométriques de roches soumises à des cycles "humidification-séchage", *Géographie physique et Quaternaire*, *41*, 345–354.
- Hanna, E., et al. (2013), Ice-sheet mass balance and climate change, *Nature*, *498*, 51–59.
- Hanshaw, B. B., and B. Hallet (1978), Oxygen isotope composition of subglacial precipitated calcite: Possible paleoclimatic implications, *Science*, *200*, 1267–1270.
- Hantke, R. (1977), Eiszeitliche Stände des Rhone-Gletschers im westlichen Schweizerischen Mittelland, *Ber. Naturf. Ges. Freiburg i. Br.*, *67*, 75–83.

- Hantke, R. (1980), Die obere Süßwassermolasse der Schweiz, ihr Paläorelief und ihre stratigraphische Fortsetzung in die Vogesen-Schüttung, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 125(4), 365–374.
- Hantke, R. (1984), Zur Erdgeschichte der Albiskette, in *Der Üetliberg*, pp. 17–28.
- Hantke, R. (1987a), Relief- und Talgeschichte des Randen-Berglandes (Kt. Schaffhausen und badische Grenzgebiete zwischen Schwarzwald und Hegau), *Eiszeitalter und Gegenwart*, 37, 47–56.
- Hantke, R. (1987b), Die Alpen im Eiszeitalter, *Mitteilungen der Naturforschenden Gesellschaft Luzern*, 29, 77–98.
- Hantke, R., and G. Rahm (1976), Das frühe Spätglazial in den Quellästen der Alb (Südlicher Schwarzwald), *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 121, 293–299.
- Hantke, R., F. Hofmann, and G. Rahm (1987), Wie weit reichte das risszeitliche Eis auf der Ostabdachung des Südschwarzwaldes?, *Jahresheft geol. Landesamt Baden-Württemberg*, 29, 39–46.
- Happoldt, H., and L. Schrott (1989), Globalstrahlung und Bodentemperaturen in der periglazialen Höhenstufe am Aconcagua, argentinische Hochanden, *Bayreuther Geowissenschaftliche Arbeiten*, 14, 35–45.
- Harrison, W. D., L. R. Mayo, and D. C. Trabant (1973), Temperature measurements on Black Rapids Glacier, Alaska, 1973, in *Climate of the Arctic Twenty Fourth Alaska Science Conference, August 15-17, 1973*, pp. 350–352.
- Hasholt, B. (1986), Mapping of the Mitdluagkat glacier and some hydro-glaciological observations, *Geografisk Tidsskrift*, 86, 9–16.
- Hasholt, B. (1988), Massbalance studies of the Mitdluagkat glacier, Eastern Greenland, *Geografisk Tidsskrift*, 88, 82–85.
- Hastenrath, S. (1977a), Observations on soil frost phenomena in the Peruvian Andes, *Geomorphologie. N. F.*, 21(3), 357–362.
- Hastenrath, S. (1977b), Pleistocene mountain glaciation in Ethiopia, *Journal of Glaciology*, 18, 309–313.
- Hastenrath, S. (1978), Heat-budget measurements on the Quelccaya Ice Cap, Peruvian Andes, *Journal of Glaciology*, 20, 85–97.
- Hastenrath, S. (1982), On meridional heat transports in the world ocean, *Journal of Physical Oceanography*, 12(8), 922–927.
- Hastenrath, S. (1983), Diurnal thermal forcing and hydrological response of Lewis Glacier, Mount Kenya, *Archiv für Meteorologie, Geophysik und Bioklimatologie*, 32, 361–373.
- Hastenrath, S., and R. A. Caukwell (1979), Variations of Lewis Glacier, Mount Kenya, 1974-78, *Erdkunde*, 33, 292–297.
- Hastenrath, S., and R. A. Caukwell (1987), Variations of Lewis glacier, Mount Kenya, 1982-86, *Erdkunde*, 41, 37–41.
- Hastenrath, S., and B. Koci (1981), Micro-morphology of the snow surface at the Quelccaya Ice Cap, Peru, *Journal of Glaciology*, 27, 423–427.

- Hastenrath, S., and P. Kruss (1979), Dynamics of crevasse pattern at Lewis Glacier, Mount Kenya, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 15, 201–207.
- Hastenrath, S., and P. Kruss (1982), On the secular variation of ice flow velocity at Lewis Glacier, Mount Kenya, Kenya, *Journal of Glaciology*, 28, 33–339.
- Hastenrath, S., and D. Polzin (2003/2004), Volume decrease of Lewis Glacier, Mount Kenya, 1978-2004, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 39, 133–139.
- Hastenrath, S., and R. Rostom (1990), Variations of the Lewis and Gregory glaciers, Mount Kenya, 1978-86-90, *Erdkunde*, 44, 313–318.
- Hastenrath, S., and M. Wu (1982), Oscillations of upper-air circulation and anomalies in the surface climate of the tropics, *Archiv für Meteorologie, Geophysik und Bioklimatologie*, 31, 1–37.
- Hastenrath, S., M. Wu, and P. Chu (1984), Towards the monitoring and prediction of north-east Brazil droughts, *Quarterly Journal of the Royal Meteorological Society*, 110, 411–425.
- Hastenrath, S., R. Rostom, and R. A. Caukwell (1989), Variations of Mount Kenya's glaciers 1963-87, *Erdkunde*, 43, 202–210.
- Hastenrath, S., R. S. Rostom, and W. F. Hime (1995), Variations of the Lewis and Gregory glaciers, Mount Kenya, 1990-1993, *Erdkunde*, 49, 60–62.
- Hayakawa, Y. S., T. Oguchi, and Z. Lin (2008), Comparison of new and existing global digital elevation models: ASTER G-DEM and SRTM-3, *Geophysical Research Letters*, 35, L17,404, doi:10.1029/2008GL035036.
- Heimann, M. (1997), A Review of the Contemporary Global Carbon Cycle and as Seen a Century Ago by Arrhenius and Högbom, *Ambio*, 26(1), 17–24.
- Heliker, C. C., A. Johnson, and S. M. Hodge (1984), The Nisqually Glacier, Mount Rainier, Washington, 1857–1979: A summary of the long-term observations and a comprehensive bibliography, *Open-file report by the Department of Interior Geological Survey*, 83-541, in Nisqually Glacier folder.
- Heller, F., and W. Junda (1991), Magnetism of quaternary sediments: Loess in China, in *Special Proceedings Review Reports for Symposia of the XIII International Congress*, pp. 88–95, International Union for Quaternary Research.
- Henoch, W. E. S. (1969), Topographic Maps of Canada in Glaciological Research, *Canadian Cartographer*, 6, 118–130.
- Hertig, P. (1994), Wo sich weise Häupter versammeln, *Illustrierte Sonntagsbeilage zum Oberländischen Volksblatt und Echo von Grindelwald*, 93(7), 3.
- Heuberger, H. (1975a), Das Ötztal. Bergstürze und alte Gletscherstände, kulturgeographische Gliederung, *Innsbrucker Geographische Studien*, 2, 213–230.
- Heuberger, H. (1975b), 2. Innsbrucker Nordkette: Forstprobleme und Lawinenschutz, Trinkwasserversorgung, Höttinger Breccie, *Innsbrucker Geographische Studien*, 2, 43–65.
- Heuberger, H. (1977), Zur Gletscher- und Landschaftsgeschichte, in *Böden des inneralpinen Trockengebietes in den Räumen oberes Inntal und mittleres Ötztal*, pp. 10–23.

- Heuberger, H. (1980a), Zur Nomenklatur der Glazialablagerungen aus ostalpiner Sicht, *Verhandlungen des naturwissenschaftlichen Vereins Hamburg*, 23, 93–100.
- Heuberger, H. (1980b), *Höhengrenzen in Hochgebirgen. Arbeiten aus dem Geograph. Institut der Universität des Saarlandes*, chap. Die Schneegrenze als Leithorizont in der Geomorphologie, pp. 35–48, Jentsch, Ch. and Liedtke, H.
- Heuberger, H. (1986), Der Bergsturz von Khumdschung, Mount-Everest-Gebiet, Nepal, *Material und Technik*, 14(3), 175–181.
- Heuberger, H., and W. Schwackhöfer (1988), Das Gebiet des eiszeitlichen Salzachvorlandgletschers und seine landwirtschaftliche Nutzung, in *Salzburg Mittlere Ostalpen*, pp. 40–45.
- Hewitt, K. (1988), Catastrophic landslide deposits in the Karakoram Himalaya, *Science*, 242, 64–67.
- Hewitt, K., C. P. Wake, G. J. Young, and C. David (1989), Hydrological investigations at Biafo glacier, Karakoram range, Himalaya; an important source of water for the Indus river, *Annals of Glaciology*, 13, 103–108.
- Higgins, A. K., and A. Weidick (1988), The world's northernmost surging glacier?, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 24, 111–123.
- Hirabayashi, Y., P. Döll, and S. Kanae (2010), Global-scale modelling of glacier mass balances for water resources assessments: Glacier mass changes between 1948 and 2006, *Journal of Hydrology*, 390, 245–256, doi:10.1016/j.jhydrol.2010.07.001.
- Hock, R. (2005), Glacier melt: a review of processes and their modelling, *Progress in Physical Geography*, 29(3), 362–391, doi:10.1191/0309133305pp453ra.
- Hock, R., D. Kootstra, and C. Reijmer (2007), Deriving glacier mass balance from accumulation area ratio on Storglaciären, Sweden, in *Glacier mass balance changes and meltwater discharge (selected papers from sessions at the IAHS Assembly in Foz do Iguacu, Brazil. 2005) IAHS Publ. 318*.
- Hodge, S. M. (1974), Variations in the sliding of a temperate glacier, *Journal of Glaciology*, 13(69), 349–369, in Nisqually glacier folder.
- Hoeck, E. (1947), Die Entwicklung des Wasserwertes der Schneedecke im Einzugsgebiete der Limmat im Winter 1946/47, *Wasser- und Energiewirtschaft*, 4, 3–8.
- Hoelzle, M., and M. Trindler (1998), *Into the second century of world glacier monitoring: prospects and strategies*, chap. Data management and application, pp. 53–72, UNESCO.
- Hoelzle, M., M. Dischl, and R. Frauenfelder (2000), Weltweite Gletscherbeobachtung als Indikator der globalen Klimaerwärmung, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 145(1), 5–12.
- Hoelzle, M., W. Haeberli, M. Dischl, and W. Peschke (2003a), Secular glacier mass balances derived from cumulative glacier length changes, *Global and Planetary Change*, 36, 295–306, doi:10.1016/S0921-8181(02)00223-0.
- Hoelzle, M., W. Haeberli, M. Dischl, and W. Peschke (2003b), Secular glacier mass balances derived from cumulative glacier length changes, *Global and Planetary Change*, 36, 295–306, doi:10.1016/S0921-8181(02)00223-0.

- Hoelzle, M., T. Chinn, D. Stumm, F. Paul, M. Zemp, and W. Haeberli (2007), The application of glacier inventory data for estimating past climate change effects on mountain glaciers: A comparison between the European Alps and the Southern Alps of New Zealand, *Global and Planetary Change*, 56, 69–82.
- Hoffman, J. S., D. Keyes, and J. G. Titus (1983), Projecting future sea level rise. Methodology, estimates to the year 2100, and research needs, *Tech. rep.*, U.S. Environmental Protection Agency.
- Hoinkes, H. (1953), Zur Frage der Schmutzbänder auf den Gletscherzungen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 2(2), 177–184.
- Hoinkes, H. (1964), *Research in Geophysics Volume 2: Solid Earth and Interface Phenomena*, vol. 2, chap. Glacial meteorology, pp. 391–424, The Massachusetts Institute of Technology.
- Hoinkes, H. (1967), Gletscherschwankungen und Wetter in den Alpen, in *9. Internationale Tagung für alpine Meteorologie in Brig und Zermatt 14-17. Sept. 1966*, vol. 4, pp. 9–24.
- Hoinkes, H. (1970), Ergebnisse des glazial-meteorologisch-hydrologischen IHD-Programmes im Rofental bei Vent 1964-1968, *Österreichische Wasserwirtschaft*, 22(5/6), 101–113.
- Hoinkes, H. (1971a), Über Beziehungen zwischen der Massenbilanz des Hintereisferners (Ötztaler Alpen, Tirol) und Beobachtungen der Klimastation Vent, *Annalen der Meteorologie*, 5, 259–264.
- Hoinkes, H. (1971b), *Die Alpen, farbig*, chap. Gletscher und Lawinen in den Alpen, pp. 9–20, Umschau / Pinguin.
- Hoinkes, H. (1972a), Die Ausbrüche (Surges) des Kolka-Gletschers in Nord-Ossetien, Zentraler Kaukasus, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 8(1-2), 253–270.
- Hoinkes, H. (1972b), *Zeichen der Natur. Das grosse Buch der Naturvorgänge*, chap. Gletscher und Lawinen, pp. 165–177, Gerlach, W.
- Hoinkes, H., and H. Lang (1962), Winterschneedecke und Gebietsniederschlag 1957/58 und 1958/59 im Bereich des Hintereis- und Kesselwandferners (Ötztaler Alpen), *Archiv für Meteorologie, Geophysik und Bioklimatologie*, 11(4), 424–446.
- Hoinkes, H., and R. Rudolph (1960), Abfluss und Ablation am Rotmoosferner (Ötztaler Alpen, 28. August bis 6. September 1955), *Wetter und Leben*, 12, 14.
- Hoinkes, H., and G. Wendler (1966), Die Berechnung des Strahlungsanteils an der Ablation im Gebiet des Hintereis- und Kesselwandferners (Oetztaler Alpen) im Sommer 1958, in *9. Internationale Tagung für alpine Meteorologie in Brig und Zermatt 14-17. Sept. 1966*, vol. 4, pp. 43–45.
- Hoinkes, H., and G. Wendler (1968), Der Anteil der Strahlung an der Ablation von Hintereis- und Kesselwandferner (Ötztaler Alpen, Tirol) im Sommer 1958, *Archiv für Meteorologie, Geophysik und Bioklimatologie*, 16, 195–236.
- Hoinkes, H., F. Howorka, and W. Schneider (1967), Glacier mass budget and mesoscale weather in the Austrian Alps 1964 to 1966, in *Commission of Snow and Ice. General Assembly Bern, Sept.-Oct. 1967*, pp. 241–254.

- Hoinkes, H., E. Dreiseitl, and H. P. Wagner (1974), Mass balance of Hintereisferner and Kesselwandferner 1963/64 to 1972/73 in relation to the climatic environment. Preliminary results of the combined water, ice and heat balances project in the Rofental, in *IHD - Activities in Austria 1965-1974*, pp. 42–53.
- Hoinkes, H., A. Lässer, and G. Patzelt (1975), *Hochwasser und Lawinenschutz in Tirol*, chap. Die Vergletscherung der Zillertaler Alpen, ihre Veränderungen und ihr Einfluss auf die Hydrologie, pp. 321–334, Land Tirol.
- Höllermann, P. (1968), Die rezenten Gletscher der Pyrenäen, *Geographica Helvetica*, *23*, 157–168, doi:10.5194/gh-23-157-1968,1968.
- Höllermann, P. (1983), Probleme der Blockgletscherforschung. Referat der Diskussionsbeiträge, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, *35*, 151–159.
- Holmlund, E. S., and P. Holmlund (2019), Constraining 135 years of mass balance with historic structure-from-motion photogrammetry on storglaciären, sweden, *Geografiska Annaler: Series A, Physical Geography*, pp. 1–16, doi:10.1080/04353676.2019.1588543.
- Holmlund, P. (1996), Maps of Storglaciären and their use in glacier monitoring studies, *Geografiska Annaler*, *78 A*(2-3), 193–196.
- Holmlund, P., and M. Eriksson (1989), The cold surface layer on Storglaciären, *Geografiska Annaler*, *71*(3-4), 241–244.
- Holzhauser, H., and W. Wetter (1982), Auswertung historischer Quellen zur jüngsten Gletschergeschichte, *Physische Geographie*, *1*, 49–60.
- Holzhauser, H., M. Magny, and H. J. Zumbühl (2005), Glacier and lake-level variations in west-central Europe over the last 3500 years, *The Holocene*, *15*(6), 789–801.
- Hooke, R. L. (1976), Near-surface temperatures in the superimposed ice zone and lower part of the soaked zone of polar ice sheets, *Journal of Glaciology*, *16*, 302–304.
- Hooke, R. L., B. Wold, and J. O. Hagen (1985), Subglacial hydrology and sediment transport at Bondhusbreen, southwest Norway, *Geological Society of America Bulletin*, *96*, 388–397.
- Hooke, R. L., G. W. Johnson, K. A. Brugger, B. Hanson, and G. Holdsworth (1987), Changes in mass balance, velocity, and surface profile along a flow line on Barnes Ice Cap, 1970-1984, *Canadian Journal of Earth Sciences*, *24*, 1550–1561.
- Hoppe, G., and V. Schytt (1953), Some observations on fluted moraine surfaces, *Geografiska Annaler*, *35*(2), 105–115.
- Horai, K. (1969), Effect of past climatic changes on the thermal field of the earth, *Earth and Planetary Science Letters*, *6*, 39–42.
- Hormes, A., B. U. Müller, and C. Schlüchter (2001), The Alps with little ice: evidence for eight Holocene phases of reduce glacier extent in the Central Swiss Alps, *The Holocene*, *11*(3), 255–265.
- Huang, M. (1991), Progress in the studies on physics of glaciers in China in the last ten years, *Chinese Science Bulletin*, *36*(5), 353–358.

- Huggel, C., W. Haeberli, A. Kääh, M. Hoelzle, E. Ayros, and C. Portocarrero (2003), Assessment of glacier hazards and glacier runoff for different climate scenarios based on remote sensing data: A case study for a hydropower plant in the Peruvian Andes, in *EARSeL Workshop, Observing our cryosphere from space, Bern, 11.3.-13.3.2002*.
- Huggel, C., S. Zraggen-Oswald, W. Haeberli, A. Kääh, A. Polkvoj, I. Galuskhin, and S. G. Evans (2005), The 2002 rock/ice avalanche at Kolka/Karmadon, Russian Caucasus: assessment of extraordinary avalanche formation and mobility, and application of QuickBird satellite imagery, *Natural Hazards and Earth System Sciences*, 5, 173–187.
- Huggel, C., J. L. Ceballos, B. Pulagarín, J. Ramirez, and J. Thouret (2007), Review and reassessment of hazards owing to volcano-glacier interactions in Colombia, *Annals of Glaciology*, 45, 128–136.
- Hughes, P. D. (2007), Recent behaviour of the Debeli Namet glacier, Durmitor, Montenegro, *Earth Surface Processes and Landforms*, 32, 1593–1602, doi:10.1002/esp.1537.
- Huss, M. (2011), Present and future contribution of glacier storage change to runoff from macromacro drainage basins in Europe, *Water Resources Research*, 47, W07,511, doi:10.1029/2010WR010299.
- Huss, M. (2013), Density assumptions for converting geodetic glacier volume change to mass change, *The Cryosphere*, 7, 877–887, doi:10.5194/tc-7-877-2013,2013.
- Huss, M., and D. Farinotti (2012), Distributed ice thickness and volume of all glaciers around the globe, *Journal of Geophysical Research*, 117, F04,010, doi:10.1029/2012JF002523.
- Huss, M., and M. Fischer (2016), Sensitivity of very small glaciers in the swiss alps to future climate change, *Frontiers in Earth Science*, 4, 34, doi:10.3389/feart.2016.00,034, doi:10.3389/feart.2016.00034.
- Huss, M., and R. Hock (2018), Global-scale hydrological response to future glacier mass loss, *Nature Climate Change*, 8(2), 135.
- Huss, M., A. Bauder, M. Werder, M. Funk, and R. Hock (2007), Glacier-dammed lake outburst event of Gornersee, Switzerland, *Journal of Glaciology*, 53(181), 189–200.
- Huss, M., R. Stöckli, G. Kappenberger, and H. Blatter (2008), Temporal and spatial changes of Laika Glacier, Canadian Arctic, since 1959, inferred from satellite remote sensing and mass-balance modelling, *Journal of Glaciology*, 54(188), 857–866.
- Huss, M., A. Bauder, and M. Funk (2009), Homogenization of long term mass balance time series, *Annals of Glaciology*, 50(50), 198–206, doi:10.3189/172756409787769627.
- Huss, M., R. Hock, A. Bauder, and M. Funk (2012), Conventional versus reference-surface mass balance, *Journal of Glaciology*, 58(208), 278–286.
- Huss, M., M. Zemp, P. C. Joerg, and N. Salzmann (2014), High uncertainty in 21st century runoff projection from glacierized basins, *Journal of Hydrology*, 510, 35–48.
- Huss, M., L. Dhulst, and A. Bauder (2015), New long-term mass balance series for the Swiss Alps, *Journal of Glaciology*, p. 13 pp.
- Hutter, K. (1979), Stoffgleichungen von Eis, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 15(1), 47–63.

- Hutter, K. (1980a), Time-dependent surface elevation of an ice slope, *Journal of Glaciology*, 25(92), 247–266.
- Hutter, K. (1980b), A note on rate process theory and creep response of ice, *Cold Regions Science and Technology*, 3, 335–336.
- Hutter, K. (1982a), A mathematical model of polythermal glaciers and ice sheets, *Geophysical and Astrophysical Fluid Dynamics*, 21, 201–224.
- Hutter, K. (1982b), Dynamics of glaciers and large ice masses, *Ann. Rev. Fluid Mech.*, 14, 87–130.
- Hutter, K., and T. Alts (1985), Ice and snow mechanics. A challenge to theoretical and applied mechanics, in *Theoretical and Applied Mechanics*, pp. 163–217.
- Hutter, K., and V. O. S. Olunloyo (1980), On the distribution of stress and velocity in an ice strip, which is partly sliding over and partly adhering to its bed, by using a Newtonian viscous approximation, *Proceedings Royal Society London*, 373, 385–403.
- Hutter, K., and L. Vulliet (1985), Gravity-driven slow creeping flow of a thermoviscous body at elevated temperatures, *Journal of Thermal Stresses*, 8, 99–138.
- Hutter, K., F. Legerer, and U. Spring (1981), First-order stresses and deformations in glaciers and ice sheets, *Journal of Glaciology*, 27(96), 227–270.
- Hutter, K., H. Blatter, and M. Funk (1988), A model computation of moisture content in polythermal glaciers, *Journal of Geophysical Research*, 93, 205–214.
- Iken, A. (1972), Measurements of water pressure in moulins as part of a movement study of the White Glacier, Axel Heiberg Island, Northwest Territories, Canada, *Journal of Glaciology*, 11(61), 53–58.
- Iken, A. (1973), Schwankungen der Oberflächengeschwindigkeit des White Glacier, Axel Heiberg Island. In Zusammenhang mit Schwankungen der Wasserführung von Gletscherbächen und des Wasserdruckes in Gletschermühlen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 9(1-2), 207–219.
- Iken, A., and R. A. Bindschadler (1986), Combined measurements of subglacial water pressure and surface velocity of Findelengletscher, Switzerland: Conclusions about drainage system and sliding mechanism, *Journal of Glaciology*, 32(110), 101–119.
- Iken, A., and M. Truffer (1997), The relationship between subglacial water pressure and velocity of Findelengletscher, Switzerland, during its advance and retreat, *Journal of Glaciology*, 43(144), 328–338.
- Inainte, C. (1989), Muntii Retezat. Studiu Geomofologic, Ph.D. thesis, Universitatea "Al. I. Cuza" IASI.
- Ives, J. D. (1962), Permafrost in Central Labrador-Ungava, *Journal of Glaciology*, 3, 789–790.
- Ives, J. D., A. I. Mears, P. E. Carrara, and M. J. Bovis (1976), Natural hazards in Mountain Colorado, *Annals of the Association of American Geographers*, 66, 129–144.
- Jackson, L. E., and J. J. Clague (1991), The cordilleran ice sheet, *Géographie physique et Quaternaire*, 45(3), 270–280.

- Jackson, L. E., and J. S. Isobe (1990), Rock avalanches in the pelly mountains, yukon territory, *Current Research*, pp. 263–269.
- Jackson, L. E., and G. M. Macdonald (1980), Movement of an ice-cored rock glacier, tungsten, n.w.t., canada, 1963-1980, *Arctic*, 33(4), 842–847.
- Jackson, L. E., G. M. MacDonald, and M. C. Wilson (1982), Paraglacial origin for terraced river sediments in bow valley, alberta, *Canadian Journal of Earth Sciences*, 19(12), 2219–2231.
- Jackson, L. E., B. Ward, A. Duk-Rodkin, and O. L. Hughes (1991), The last cordilleran ice sheet in southern yukon territory, *Géographie physique et Quaternaire*, 45(3), 341–354.
- Jacob, T., J. Wahr, W. T. Pfeffer, and S. Swenson (2012), Recent contribution of glaciers and ice caps to sea level rise, *Nature*, 482, 514–518.
- Jacobsen, F. M., and W. H. Theakstone (1995), The use of planimetric surface area in glacier mass-balance calculations: a potential source of errors, *Journal of Glaciology*, 41(139), 441–445.
- Jaeggi, M. N. R. (1988), Sicherheitsüberlegungen im Flussbau, *wasser, energie, luft - eau. énergie, air*, 9, 193–197.
- Jaeggi, M. N. R. (1989), Die Rheinmündung heute und morgen, in *Vermessung, Photogrammetrie, Kulturtechnik*, 1, pp. 21–23.
- Jaeggi, M. N. R., and B. Zarn (1990), A new policy in designing flood protection schemes as a consequence of the 1987 flood in the Swiss Alps, in *International Conference on River Flood Hydraulics*, pp. 75–84.
- Jahn, A. (1979), On holocene and present-day morphogenetic processes in the Tatra Mountains, *Studia Geomorphologica Carpatho-Balcanica*, 13, 11–129.
- Jahn, A., and M. Cielinska (1975), The rate of soil movement in the Sudety Mountains, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, 3(29), 86–101.
- Jakobsson, M., R. Macnab, L. Mayer, R. Anderson, M. Edwards, J. Hatzky, H. W. Schenke, and P. Johnson (2008), An improved bathymetric portrayal of the Arctic Ocean: Implications for ocean modelling and geological, geophysical and oceanographic analyses, *Geophysical Research Letters*, 35, 5 pp.
- Jansson, P. (1999), Effect of uncertainties in measured variables on the calculated mass balance of Storglaciären, *Geografiska Annaler*, 81(4), 633–642.
- Jansson, P., and R. Pettersson (2007), Spatial and temporal characteristics of a long mass balance record, Storglaciären, Sweden, *Arctic, Antarctic and Alpine Research*, 39, 432–437.
- Jayet, A. (1946), Les stades de retrait würmiens aux environs de Genève, *Eclogae Geologicae Helveticae*, 39(2), 237–244.
- Jayet, A. (1966), Résumé de géologie glaciaire régionale, 1-56 pp.
- Jeanneret, F. (1975), Blockgletscher in den Südalpen Neuseelands, *Geomorphologie. N. F.*, 19(1), 83–94.
- Jezeq, K. C., J. W. Clough, C. R. Bentley, and S. Shabtaie (1978), Dielectric permittivity of glacier ice measured in situ by radar wide-angle reflection, *Journal of Glaciology*, 21(85), 315–329.

- Jianzhong, S. (1988), Environmental Geology in Loess Areas of China, *Environmental Geology and Water Sciences*, 12(1), 49–61.
- Joerg, P. C. (2011), Airborne laser scanning im Einsatz der Glaziologie am Findelengletscher, *Géomatique Suisse*, 9, 444–447.
- Joerin, U. E., T. F. Stocker, and C. Schlüchter (2006), Multicentury glacier fluctuations in the Swiss Alps during the Holocene, *The Holocene*, 16(5), 697–704.
- Jóhannesson, T., C. Raymond, and E. Waddington (1989a), Time-scale for adjustment of glaciers to changes in mass balance, *Journal of Glaciology*, 35(121), 355–369.
- Jóhannesson, T., C. Raymond, and E. Waddington (1989b), *Glacier fluctuations and climatic change. Proceedings of the symposium on glacier fluctuations and climatic change, held in Amsterdam, 1-5 June 1987*, vol. 6, chap. A simple method for determining the response time of glaciers, pp. 343–352, Kluwer Academic Publishers.
- Johnson, J. P., and W. G. Nickling (1979), Englacial temperature and deformation of a rock glacier in the Kluane Range, Yukon Territory, Canada, *Canadian Journal of Earth Sciences*, 16(12), 2275–2283.
- Johnson, P. G. (1974), Mass movement of ablation complexes and their relationships to rock glaciers, *Geografiska Annaler*, 56(1-2), 93–101.
- Johnson, P. G. (1975), Mass movement processes in Metalline Creek, Southwest Yukon Territory, *Arctic and Alpine Research*, 28(2), 130–139.
- Johnson, P. G. (1980a), Rock glaciers: glacial and non-glacial origins, in *World Glacier Inventory. Proceedings of the Riederalp Workshop, September 1978*.
- Johnson, P. G. (1980b), Glacier-rock glacier transition in the Southwest Yukon Territory, Canada, *Arctic and Alpine Research*, 12(2), 195–204.
- Johnson, P. G. (1984), Paraglacial conditions of instability and mass movement. A discussion., *Geomorphologie. N. F.*, 28(2), 235–250.
- Jones, H. G. (2008), From commission to association: the transition of the International Commission on Snow and Ice (ICSI) to the International Association of Cryospheric Sciences, *Annals of Glaciology*, 48, 5.
- Jones, P. D., and M. E. Mann (2004), Climate over past millenia, *Reviews of Geophysics*, 42, 42.
- Jordan, E. (1979), Grundsätzliches zum Unterschied zwischen tropischem und aussertropischem Gletscher unter besonderer Berücksichtigung der Gletscher Boliviens, *Erdkunde*, 33, 297–309.
- Jordan, E. (1982), Möglichkeiten und Grenzen der Herstellung und synchronen Auswertung biowissenschaftlicher Verbreitung aus Luft- und anderen Messbildern mit dem neuen Kartiersystem des Stereocords am Beispiel ausgewählter Vegetationstypen Boliviens, *Verhandlungen der Gesellschaft für Ökologie*, 12, 337–353.
- Jordan, E. (1983), The utility of a glacier inventory to developing countries such as Bolivia, *Quaternary of South America and Antarctic Peninsula*, 1, 125–134.
- Jordan, E., and W. Kresse (1981), Die Computer-gestützte quantitative Luftbildauswertung mit dem Zeiss-Stereocord und seinen Peripheriegeräten zur Rationalisierung der Feldforschungen in den Geowissenschaften, *Erdkunde*, 35, 222–231.

- Josberger, E. G., W. R. Bidlake, R. S. March, and B. W. Kennedy (2007a), Glacier mass-balance fluctuations in the Pacific Northwest and Alaska, USA, *Annals of Glaciology*, *46*, 291–296.
- Josberger, E. G., W. R. Bidlake, R. S. March, and B. W. Kennedy (2007b), Glacier mass-balance fluctuations in the Pacific Northwest and Alaska, USA, *Annals of Glaciology*, *46*, 291–296.
- Jost, W. (1941), Gletscher, in *Sechster Kommentar zum Schweizerischen Schulwandbilderwerk*.
- Jouzel, J., and R. Souchez (1982), Melting-refreezing at the glacier sole and the isotopic composition of the ice, *Journal of Glaciology*, *28*(98), 35–42.
- Jouzel, J., M. Legrand, J. F. Pinglot, M. Pourchet, and L. Reynaud (1984), Chronologie d'un carottage de 20 m au col du Dôme (Massif du Mont Blanc), *La Houille Blanche*, *6*, 491–497.
- Kääb, A. (2000), Photogrammetric reconstruction of glacier mass balance using a kinematic ice-flow model: a 20 year time series on Grubengletscher, Swiss Alps, *Annals of Glaciology*, *31*, 45–52.
- Kääb, A. (2005), Combination of SRTM3 and repeat AsSTER data for deriving alpine glacier flow velocities in the Bhutan Himalaya, *Remote Sensing of the Environment*, *94*, 463–474.
- Kääb, A., and M. Weber (2004), Development of transverse ridges on rock glaciers: Field measurements and laboratory experiments, *Permafrost and periglacial processes*, *15*, 379–391.
- Kääb, A., F. Paul, M. Maisch, M. Hoelzle, and W. Haeberli (2001), The new remote sensing derived Swiss glacier inventory: II. First results, in *4th international symposium on Remote Sensing in Glaciology, Maryland*.
- Kääb, A., E. Berthier, C. Nuth, J. Gardelle, and Y. Arnaud (2012a), Contrasting patterns of Early Twenty-First-Century glacier mass change in the Himalayas, *Nature*, *488*, 495–498.
- Kääb, A., E. Berthier, C. Nuth, J. Gardelle, and Y. Arnaud (2012b), Contrasting patterns of early twenty-first-century glacier mass change in the Himalayas, *Nature*, *488*, 495–498.
- Kadota, T., K. Seko, and Y. Ageta (1993), Shrinking of Glacier AX010 since 1978, Shorong Himal, East Nepal, *IAHS - International Association of Hydrological Sciences*, *218*, 145–154.
- Kahmen, H., and H. Suhre (1983), Ein lernfähiges tachymetrisches Vermessungssystem zur Überwachung kinematischer Vorgänge ohne Beobachter, *Zeitschrift für Vermessungswesen*, *108*(8), 345–351.
- Kaiser, K. (1963), Zur Frage der Würm-Gliederung durch einen "Mittelwürm-Boden" im nördlichen Alpenvorland bei Murnau, *Eiszeitalter und Gegenwart*, *14*, 208–215.
- Kaiser, K. (1972a), Ein eiszeitlicher Wald im Dätttau, *Mitteilungen der Naturwissenschaftlichen Gesellschaft Winterthur*, *34*, 25–42.
- Kaiser, K. (1972b), Zeugen arider Verwitterungen im Sandstein von Fontainebleau, *Göttinger Geographische Abhandlungen*, *60*, 103–124.
- Kaiser, K. (1975), Die Inlandeis-Theorie, seit 100 Jahren fester Bestand der Deutschen Quartärforschung, *Eiszeitalter und Gegenwart*, *26*, 1–30.
- Kakela, P. (1965), Problems in defining Permafrost, in *The Alberta Geographical Society Prize Essay*.

- Kargel, J. S., et al. (2016), Geomorphic and geologic controls of geohazards induced by nepal's 2015 gorkha earthquake, *Science*, *351* (6269), aac8353, doi:10.1126/science.aac8353, doi:10.1126/science.aac8353.
- Karimi, N., A. Farokhnia, S. Shishangosht, M. Elmi, M. Eftekhari, and H. Ghalkhani (2012a), Elevation changes of Alamkouh glacier in Iran since 1955, based on remote sensing data, *International Journal of Applied Earth Observation and Geoinformation*, *19*, 45–58.
- Karimi, N., A. Farokhnia, L. Karimi, M. Eftekhari, and H. Ghalkhani (2012b), Combining optical and thermal remote sensing data for mapping debris-covered glaciers (Alamkouh Glaciers, Iran), *Cold Regions Science and Technology*, *71*, 73–83.
- Karrasch, H. (1972), The planetary and hypsometric variation of valley assymetry, in *International Geography*, pp. 31–34.
- Karrasch, H. (1974a), Probleme der periglazialen Höhenstufe in den Alpen, *Heidelberger Geographische Arbeiten*, *40*, 15–29.
- Karrasch, H. (1974b), Hangglättung und Kryoplanation an Beispiel aus den Alpen und kanadischen Rocky Mountains, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, *29*, 287–300.
- Karrasch, H. (1977), Die klimatischen und akklimatischen Varianzfaktoren der periglazialen Höhenstufe in den Gebirgen West- und Mitteleuropas, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, *31*, 157–177.
- Karte, J. (1981), Zur Rekonstruktion des Weichselhochglazialen Dauerfrostbodens im westlichen Mitteleuropa, *Bochumer Geographische Arbeiten*, *40*, 59–71.
- Kaser, G. (1982), Measurements of evaporation from snow, *Archiv für Meteorologie, Geophysik und Bioklimatologie*, *30*, 333–340.
- Kaser, G. (1995), Some notes on the behaviour of tropical glaciers, *Bull. Inst. fr. études andines*, *24* (3), 671–681.
- Kaser, G. (1999), A review of the modern fluctuations of tropical glaciers, *Global and Planetary Change*, *22*, 93–103.
- Kaser, G., and C. Georges (1997), Changes of the equilibrium-line altitude in the tropical Cordillera Blanca, Peru, 1930-50, and their spatial variations, *Annals of Glaciology*, *24*, 344–349.
- Kaser, G., and C. Georges (1999), On the mass balance of low latitude glaciers with particular consideration of the Peruvian Cordillera Blanca, *Geografiska Annaler*, *81*, 643–651.
- Kaser, G., J. G. Cogley, M. B. Dyurgerov, M. F. Meier, and A. Ohmura (2006), Mass balance of glaciers and ice caps: Consensus estimates for 1961-2004, *Geophysical Research Letters*, *33*, 5.
- Kaser, G., M. Grosshauser, and B. Marzeion (2010), Contribution potential of glaciers to water availability in different climate regimes, *Proceedings of the National Academy of Sciences of the United States of America*, *107*(47), 5.
- Kaspari, S. D., M. Schwikowski, M. Gysel, M. G. Flanner, S. Kang, S. Hou, and P. A. Mayewski (2011), Recent increase in black carbon concentration from a Mt. Everest ice core spanning 1860-2000 AD, *Geophysical Research Letters*, *38*, 6 pp.
- Kasser, P. (1953), Ablation und Schwund am Grossen Aletschgletscher, in *Verhandlungen der Schweizerischen Naturforschenden Gesellschaft*.

- Kasser, P. (1954), Sur le bilan hydrologique des bassins glaciaires avec application au Grand Glacier d'Aletsch, *Association Internationale d'Hydrologie*, 39, 331–350.
- Kasser, P. (1956), Sur l'indice d'évaporation du bassin versant alpin de Mattmark, *Association Internationale d'Hydrologie*, 40, 15–17.
- Kasser, P. (1957), Glaziologischer Kommentar zur neuen im Herbst 1957 aufgenommenen Karte 1:10000 des Grossen Aletschgletschers, in *A.I.H.S.*, pp. 216–223.
- Kasser, P. (1959), Der Einfluss von Gletscherrückgang und Gletschervorstoss auf den Wasserhaushalt, *Wasser- und Energiewirtschaft*, 6, 2–16.
- Kasser, P. (1960a), Ein leichter thermischer Eisbohrer als Hilfsgerät zur Installation von Ablationstangen auf Gletschern, *Geofisica pura e applicata*, 45, 97–114.
- Kasser, P. (1960b), Glaziologischer Kommentar zur neuen im Herbst 1957 aufgenommenen Karte 1:10000 des Grossen Aletschgletschers, *A.I.H.S.*, 54, 216–223.
- Kasser, P. (1963), Note on the detailed ablation studies of 1959 and 1962 on the Great Aletsch Glacier, *Bulletin I.A.S.H.*, 2, 115–118.
- Kasser, P. (1973), Influence of changes in the glacierized area on summer run-off in the Porte du Scex drainage basin on the Rhône, *Symposium on the Hydrology of Glaciers*, 95, 221–225.
- Kasser, P. (1980), On the effect of topographic orientation on the variations of glacier length, *IAHS-AISH*, 126, 65–68.
- Kasser, P., and M. Aellen (1976), Les variations des glaciers suisses en 1974-1975 et quelques indications sur les résultats récoltés pendant la Décennie Hydrologique Internationale de 1964-65 à 1973-74, *La Houille Blanche*, 6, 467–481.
- Kasser, P., and R. Haefeli (1952), Glaziologische Beobachtungen am Grossen Aletschgletscher, *Schweizerische Bauzeitung*, 70(35), 1–3.
- Kasser, P., and H. Roethlisberger (1966), Some problems of glacier mapping experienced with the 1:10000 map of the Aletsch Glacier, *Canadian Journal of Earth Sciences*, 3, 799–809.
- Kasser, P., and W. Schweizer (1955), Voraussage der globale Sommerabflusses der Rhone bei Porte du Scex auf Grund von Winterniederschlag und Winterabfluss, *Wasser- und Energiewirtschaft*, 5, 1–4.
- Kaufmann, V., M. Dorn, G. Patri, S. Reimond, and W. Sulzer (2013), Digital Camera Nikon D300 in support of high mountain studies in the Langtang Valley, Central Himalaya, Nepal, *Universal Journal of Geoscience*, 1(1), 1–9.
- Kayastha, R. B., and S. P. Harrison (2008), Changes of the equilibrium-line altitude since the Little Ice Age in the Nepalese Himalaya, *Annals of Glaciology*, 48, 93–99.
- Kehrwald, N. M., L. G. Thompson, Y. Tandong, E. Mosley-Thompson, U. Schotterer, V. Alfimov, J. Beer, J. Eikenberg, and M. E. Davis (2008), Mass loss on Himalayan glacier endangers water resources, *Geophysical Research Letters*, 35, 6.
- Kelletat, D. (1974), Die Exkursionstagung der Schweizerischen Geomorphologischen Gesellschaft zur holozänen Morphodynamik in den Schweizer Alpen vom 17. bis 23. September 1973, *Geomorphologie. N. F.*, 18(2), 215–221.

- Kerschner, H. (1978), Zur Rekonstruktion eines spätglazialen Gletscherstandes mit Hilfe eines rechnerisch ermittelten Zungenlängsprofils, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 14(1), 119–123.
- Kerschner, H. (1983), Ostalpine Wetterlagen und Luftmassen - ein sommerliches Querprofil Salzburg - Sonnblick - Klagenfurt, *Innsbrucker Geographische Studien*, 8, 131–142.
- Kerschner, H. (1985), Quantitative paleoclimatic inferences from lateglacial snowline, timberline and rock glacier data, Tyrolean Alps, Austria, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 21, 363–369.
- Kerschner, H. (1996), Multivariate statistical modelling of equilibrium line altitudes: Hintereisferner (Ötztal) - Stubacher Sonnblickkees (Hohe Tauern), *Zeitschrift für Gletscherkunde und Glazialgeologie*, 32, 119–127.
- Kerschner, H. (2002), Mountain glaciers as source of paleoclimatic information - an alpine perspective, *WMO Bulletin*, 51(1), 29–35.
- Kerschner, H., S. Ivy-Ochs, and C. Schlüchter (1999), Paleoclimatic interpretation of the early Late-glacial glacier in the Gschnitz valley, Central Alps, Austria, *Annals of Glaciology*, 28, 135–140.
- Kerschner, H., G. Kaser, and R. Sailer (2000), Alpine younger Dryas glaciers as paleo-precipitation gauges, *Annals of Glaciology*, 31, 80–84.
- Khodakov, V. G. (1971), Glaciers as water resource indicator of the glacial areas of the USSR, in *Snow and ice - symposium - Neiges et glaces (Proceedings of the Moscow Symposium, August 1971)*.
- Kick, W. (1985), Geomorphologie und rezente Gletscheränderungen in Hochasien, *Regensburger Geographische Schriften*, 19, 53–78.
- Kienholz, H. (1980), Beurteilung und Kartierung von Naturgefahren, *Berliner Geographische Abhandlungen*, 31, 83–90.
- King, L. (1976), Permafrostuntersuchungen in Tarfala (Schwedisch Lappland) mit Hilfe der Hamerschlagseismik, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 12(2), 187–204.
- King, L. (1979), Palsen und Permafrost in Quebec, *Trierer Geographische Studien*, 2, 141–156.
- King, L. (1981a), Typen von Torfhügeln im Gebiet der Oobloyah Bay, N-Ellesmere Island, N.W.T., Kanada, *Polarforschung*, 51(2), 201–211.
- King, L. (1981b), Ergebnisse der Heidelberg Ellesmere Island Expedition. Das Sommerklima von N-Ellesmere Island, N.W.T., Kanada - Eine Beurteilung von Stationswerten unter besonderer Berücksichtigung des Sommers 1978, *Heidelberger Geographische Arbeiten*, 69, 77–107.
- King, L. (1981c), Ergebnisse der Heidelberg Ellesmere Island Expedition. The mosses of peat mounds, Oobloyah Bay, northern Ellesmere Island, N.W.T., Canada, *Heidelberger Geographische Arbeiten*, 69, 555–558.
- King, L. (1981d), Ergebnisse der Heidelberg Ellesmere Island Expedition. Das Borup-Fjord-Gebiet in N-Ellesmere Island, N.W.T., Kanada: Entdeckung und Begehung des Gebietes, vorhandene KKarte und ihre offizielle Namen, *Heidelberger Geographische Arbeiten*, 69, 15–33.

- King, L. (1981e), Ergebnisse der Heidelberg Ellesmere Island Expedition. Die Gletscher im Einzugsgebiet des Borup-Fjords, N-Ellesmere Island, N.W.T., Kanada., *Heidelberger Geographische Arbeiten*, 69, 203–232.
- King, L. (1981f), Ergebnisse der Heidelberg Ellesmere Island Expedition. Gletschergeschichtliche Arbeiten im Gebiet zwischen Oobloyah Bay und Esayoo Bay, N-Ellesmere Island., N.W.T., Kanada., *Heidelberger Geographische Arbeiten*, 69, 223–267.
- King, L. (1981g), Ergebnisse der Heidelberg Ellesmere Island Expedition. Die Meereisentwicklung im Inneren des östlichen kanadischen Arktisarchipels und ihre Bedeutung für die Arbeiten der Heidelberg-Ellesmere Island-Expedition an der Oobloyah Bay, N-Ellesmere Island, N.W.T., Kanada., *Heidelberger Geographische Arbeiten*, 69, 233–267.
- Kinzl, H. (1949), Formenkundliche Beobachtungen im Vorfeld der Alpengletscher, *Veröffentlichungen des Museum Ferdinandeum (Innsbruck)*, 26, 61–82.
- Klaer, W. (1974), Kritische Anmerkungen zur neueren Literatur über das Blockgletscherproblem, *Heidelberger Geographische Arbeiten*, 40, 275–291.
- Klapowa, M. (1968), Effect of air temperature on ground temperature at the upper tree line in the Tatra, *Przegląd Geograficzny*, 2, 499–504.
- Kleiber, H. (1974), Pollenanalytische Untersuchungen zum Eisrückzug und zur Vegetationsgeschichte im Oberengadin I, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie*, 94(1), 1–53.
- Klimaszewski, M. (1971), A contribution to the theory of rock-face development, *Studia Geomorphologica Carpatho-Balcanica*, 5, 139–151.
- Klingele, E., and H.-G. Kahle (1977), Gravity profiling as a technique for determining the thickness of glacier ice, *Pure and Applied Geophysics*, 115, 989–998.
- Klok, E. J., and J. Oerlemans (2002), Model study of the spatial distribution of the energy and mass balance of Morteratschgletscher, Switzerland, *Journal of Glaciology*, 48(163), 505,518.
- Klok, E. J., and J. Oerlemans (2003), Deriving historical equilibrium-line altitudes from a glacier length record by linear inverse modelling, *The Holocene*, 13(3), 343–351.
- Klok, E. J., and J. Oerlemans (2004), Climate reconstructions derived from global glacier length records, *Arctic, Antarctic and Alpine Research*, 36(4), 575–583.
- Knoll, C., and H. Kerschner (2009), A glacier inventory for South Tyrol, Italy, based on airborne laser-scanner data, *Annals of Glaciology*, 50(53), 46–52.
- Knudsen, N. T., and B. Hasholt (2008), Mass balance observations at Mittivakkat Glacier, Ammassalik Island, Southeast Greenland 1995-2006, *Danish Journal of Geography*, 108(1), 111–120.
- Koch, J., and J. J. Clague (2006), Are insolation and sunspot activity the primary drivers of Holocene glacier fluctuations?, *Pages News*, 14(3), 20–21.
- Kohler, J., T. D. James, T. Murray, C. Nuth, O. Brandt, N. E. Barrand, and H. F. Aas (2007), Acceleration in thinning rate on western Svalbard glaciers, *Geophysical Research Letters*, 34, 5 pp.
- Kölla, E. (1987), Estimating flood peaks from small rural catchments in Switzerland, *Journal of Hydrology*, 95, 203–225.

- Kölla, E. (1989), Vom Regen in den Bach. Künstliche Simulation natürlicher Abflussvorgänge, *Die Geowissenschaften*, 2, 38–43.
- Kononov, Y. M., and M. D. Ananicheva (2005), High resolution reconstruction of Polar Ural glaciers mass balance for the last millenium, *Annals of Glaciology*, 42, 163–170.
- Konz, M., and J. Seibert (2010), On the value of glacier mass balances for hydrological model calibration, *Journal of Hydrology*, 385, 238–246.
- Körner, H. J. (1983), Theorie der plastisch rotierenden Kar-Gletscherbewegung und ihre Anwendung, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 19(2), 103–130.
- Kotlyakov, V. M. (1997), *World atlas of snow and ice resources*, Russian Academy of Sciences.
- Kotlyakov, V. M., and A. N. Krenke (1982), Investigations of the hydrological conditions of alpine regions by glaciological methods, in *Hydrological aspects of alpine and high mountain areas (Proceedings of the Exeter Symposium, July 1982)*.
- Koutavas, A., P. B. DeMenocal, and J. Lynch-Stieglitz (2006), Holocene trends in tropical Pacific sea surface temperatures and the El Niño-Southern Oscillation, *Pages News*, 14(3), 22–23.
- Kozarski, S. (1987), Sedimentological and lithostratigraphical basis for a paleogeographic analysis of the last glaciation in West Central Poland, *Wissenschaftliche Zeitschrift Ernst-Moritz-Arndt-Universität*, 36(2-3), 7–12.
- Krayss, E. (1985), Rutschungen im St.Gallisch-appenzellischen Molassegebiet (Widenbach, Goldach, Sitter), *Berichte der St.Gallischen Naturwissenschaftlichen Gesellschaft*, 82, 150–168.
- Krayss, E. (1988), Zur riss-würmzeitlichen Quartärgeologie im westlichen Rheingletschergebiet, *Geomorphologie. N. F.*, 70, 1–12.
- Krenke, A. N. (1971), Climatic conditions of present-day glaciation in Soviet Central Asia, in *Snow and ice - Symposium - Neiges et Glaces (Proceedings of the Moscow Symposium, August 1971)*.
- Krimmel, R. M., and L. A. Rasmussen (1986), Using sequential photography to estimate ice velocity at the terminus of Columbia Glacier, Alaska, *Annals of Glaciology*, 8, 117–123.
- Kropatschek, E. (1973), Die Geodäsie im Dienste der Gletscherforschung, in *Beiträge zur Klimatologie, Meteorologie und Klimamorphologie. Festschrift für Hanns Tollner zum 70. Geburtstag*.
- Kruss, P., and S. Hastenrath (1983), Variation of ice velocity at Lewis Glacier, Mount Kenya, Kenya: Verification midway into a forecast, *Journal of Glaciology*, 29(101), 48–54.
- Kudyshkin, T. V., Y. A. Tarasov, and A. V. Yakovlev (2014), Changes in the Glaciation of the River Basins with a Predominance of Small Glaciers in the Second Part of XX Century and in the Beginning of XXI Century, *Issues Geogr. Geoecology*, (4), 45–54.
- Kuhle, M. (1984a), Zur Geomorphologie Tibets, Bortensander als Kennformen semiarider Vorlandvergletscherung, *Berliner Geographische Abhandlungen*, 36, 127–138.
- Kuhle, M. (1984b), Spuren der hocheiszeitlichen Gletscherbedeckung in der Aconcagua-Gruppe (32-33°S), *Zbl. Geol. Paläont. Teil 1*, 11, 1635–1646.
- Kuhle, M. (1986), Internationales Symposium über Tibet und Hochasien vom 8. - 11. Oktober 1985 im Geographischen Institut der Universität Göttingen. Vorträge und Diskussion, *Göttinger Geographische Abhandlungen*, 81, 185–206.

- Kuhle, M. (1988), Zur Geomorphologie der nivalen und subnivalen Höhenstufe in der Karakorum-N-Abdachung zwischen Shaksgam-Tal und K2-N-Sporn: Die quartäre Vergletscherung und ihre geoökologische Konsequenz, in *46. Deutscher Geographentag in München. 12. bis 16. Oktober 1987. Tagungsbericht und wissenschaftliche Abhandlungen*, pp. 413–420.
- Kuhn, M. (1979), Climate and glaciers, in *Sea level, ice and climate change. Proceedings of the Canberra Symposium, Dezember 1979. IAHS Publication Nr. 131*.
- Kuhn, M. (1980a), Begleitworte zur Karte des Hintereisferners 1979, 1:10.000, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 16(1), 117–124.
- Kuhn, M. (1980b), Antarktis - die grösste Wüste der Welt, *Umschau in Wissenschaft und Technik*, 80(22), 675–681.
- Kuhn, M. (1980c), Vergletscherung, Nullgradgrenze und Niederschlag in den Anden, in *Jahresbericht des Sonnblick Vereins 1978-1980*.
- Kuhn, M. (1980d), Die Reaktion der Schneegrenze auf Klimaschwankungen, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 16(2), 241–254.
- Kuhn, M. (1981), Vertical flux of heat and moisture in snow and ice, in *Land surface processes in atmospheric general circulation models*.
- Kuhn, M. (1984), *Schneehydrologische Forschung in Mitteleuropa*, chap. Physikalische Grundlagen des Energie- und Massenhaushalts der Schneedecke, pp. 5–56, Deutscher Verband für Wasserwirtschaft und Kulturbau.
- Kuhn, M. (1988), Folgen einer langfristigen Erwärmung für Schnee und Eis, in *Mitteilung Nr. 94 Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie an der ETH Zürich*.
- Kuhn, M. (1989), *Glacier fluctuations and climatic change. Proceedings of the symposium on glacier fluctuations and climatic change, held in Amsterdam, 1-5 June 1987*, chap. The response of the equilibrium line altitude to climate fluctuations: Theory and observations, pp. 407–417, Kluwer Academics Publishers.
- Kuhn, M. (1990), Energieaustausch Atmosphäre - Schnee und Eis, in *Internationale Fachtagung 11. Mai in Zürich. Schnee, Eis und Wasser der Alpen in einer wärmeren Atmosphäre*.
- Kuhn, M. (1993), Methods of assessing the effects of climatic changes on snow and glacier hydrology, in *Snow and glacier hydrology (Proceedings of the Kathmandu Symposium, November 1992)*.
- Kuhn, M. (2004), Die Reaktion der österreichischen Gletscher und ihres Abflusses auf Änderungen von Temperatur und Niederschlag.
- Kuhn, M., G. Markl, G. Kaser, U. Nickus, F. Obleitner, and H. Schneider (1985), Fluctuations of climate and mass balance: Different responses of two adjacent glaciers, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 21, 409–416.
- Küttel, M. (1974), Zum alpinen Spät- und frühen Postglazial: Das Profil Obergurbs (1910 m) im Diemtigtal, Berner Oberland, Schweiz, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 10, 207–216.
- Küttel, M. (1977), Pollenanalytische und geochronologische Untersuchungen zur Piottino-Schwankung (Jüngere Dryas), *Boreas*, 3, 259–274.

- Küttel, M. (1979), Räumliche und zeitliche Korrelation der "moraines intermediaires" mit besonderer Berücksichtigung der Moränen der Alpage de Tortin, (Nendaz, VS), *Bulletin de la Murithienne*, 96, 71–83.
- Küttel, M. (1979), Pollenanalytische Untersuchungen zur Vegetationsgeschichte und zum Gletscherrückzug in den westlichen Schweizer Alpen, *Berichte der Schweizerischen Botanischen Gesellschaft*, 89(1/2), 9–62.
- Ladner, A. (1989), In jedem Landschaftswunder steckt eine Katastrophe, *Die Weltwoche*, 23, 39–41.
- Lambert, A. (1980), Die Entwicklung des Linthdeltas im Walensee zwischen 1931 und 1979, *Eclogae Geologicae Helveticae*, 73(3), 867–880.
- Lambert, A. (1982), Trübestrome des Rheins am Grund des Bodensees, *Wasserwirtschaft*, 72(4), 1–4.
- Lambert, A. (1984), Neuvermessung und geologische Kartierung des Walensees, *wasser, energie, luft - eau. énergie, air*, 76(7/8), 149–152.
- Lambert, A. (1988), Seegrundvermessungen im Lago Maggiore: Das Wachstum des Maggia- und Ticino/Verzasca-Deltas von 1890 bis 1986, *wasser, energie, luft - eau, énergie, air*, 80(1/2), 21–28.
- Lambert, A. (1989), Das Rheindelta im See, *Vermessung, Photogrammetrie, Kulturtechnik*, 1, 29–32.
- Lambert, A., and F. Giovanoli (1988), Records of riverborne turbidity currents and indications of slope failures in the Rhone Delta of Lake Geneva, *Limnology and Oceanography*, 33(3), 459–468.
- Lambert, A., and K. J. Hsü (1979), Non-annual cycles of varve-like sedimentation in Walensee, Switzerland, *Sedimentology*, 26, 453–461.
- Lambert, A., and C. Pfeiffer (1990), Neuvermessung des Lauerzerseebeckens, *wasser, energie, luft - eau. énergie, air*, 82(9), 190–194.
- Lambrecht, A., and M. Kuhn (2007), Glacier changes in the Austrian Alps during the last three decades, derived from the new Austrian glacier inventory, *Annals of Glaciology*, 46, 177–184.
- Lambrecht, A., C. Mayer, A. Wendt, D. Floricioiu, and C. Völksen (2018), Elevation change of fedchenko glacier, pamir mountains, from gnss field measurements and tandem-x elevation models, with a focus on the upper glacier, *Journal of Glaciology*, 64(246), 637–648.
- Lang, H. (1967), Relations between glacier runoff and meteorological factors observed on and around the glacier, *Swiss Federal Institute of Technology, Zürich*, pp. 429–439.
- Lang, H. (1968), Relations between glacier runoff and meteorological factors observed on and outside the glacier, *IAHS*, 79, 429–439.
- Lang, H. (1970), Ueber den Abfluss vergletscherter Einzugsgebiete und seine Beziehung zu meteorologischen Faktoren, *Mitteilungen der Versuchsanstalt für Wasserbau und Erdbau, ETHZ*, 85, 1–9.
- Lang, H. (1973), Variations in the relation between glacier discharge and meteorological elements, *IAHS*, 95, 85–94.

- Lang, H. (1978), Untersuchungen über den Wasserhaushalt und über Abflussprozesse im hydrologischen Forschungsgebiet Rietholzbach, in *Forschung in mitteleuropäischen Nationalparks. Schriftenreihe des Bayer. Staatsministeriums für Ernährung, Landwirtschaft und Forsten*.
- Lang, H. (1981), Is evaporation an important component in high alpine hydrology?, *Nordic Hydrology*, 12, 217–224.
- Lang, H., and G. Davidson (1973), Beitrag zum Problem der klimatischen Schneegrenze, in *Verhandlungen der Schweizerischen Naturforschenden Gesellschaft*.
- Lang, H., and G. Patzelt (1971), Die Volumenänderung des Hintereisferners (Öztaler Alpen) im Vergleich zur Massenänderung im Zeitraum 1953–1964, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 7(1-2), 39–55.
- Latarnser, M., and M. Schneebeli (2003), Long-term snow climate trends of the Swiss Alps, *International Journal of Climatology*, 23, 733–750.
- Leclercq, P. W., R. Van de Wal, and J. Oerlemans (2010), Comment on "100-year mass changes in the Swiss Alps linked to the Atlantic Multidecadal Oscillation" by Matthias Huss et al. (2010), *The Cryosphere Discussions*, 4, 2475–2481, doi:10.5194/tcd-4-2475-2010.
- Leclercq, P. W., J. Oerlemans, and J. G. Cogley (2011), Estimating the glacier contribution to sea-level rise for the period 1800–2005, *Surveys in Geophysics*, 32, 519–535.
- Leclercq, P. W., A. Weidick, F. Paul, T. Bolch, M. Citterio, and J. Oerlemans (2012), Brief communication: Historical glacier length changes in West Greenland, *The Cryosphere Discussions*, 6, 3491–3501.
- Lehmkuhl, F., J. Böhner, and K. T. Rost (1992), Die nivale Höhenstufe und ein Versuch ihrer klimatischen Abgrenzung anhand ausgewählter Gebiete der Alpen und Skandinaviens, *Erdkunde*, 46, 3–14.
- Leiva, C. J. (1999), Recent fluctuations of the Argentinian glaciers, *Global and Planetary Change*, 22, 169–177.
- Leiva, J. C. (2002), La situación actual de los glaciares andinos / Present situation of the Andean glaciers, in *IANIGLA, 30 años de investigación básica y aplicada en ciencias ambientales / IANIGLA, 30 years of basic and applied research on environmental sciences*, Instituto Argentino de Nivología, Glaciología y Ciencias Ambientales, Mendoza, 181–185.
- Lemmens, M., and M. Roger (1978), Influence of ion exchange on dissolved load of alpine meltwaters, *Earth Surface Processes*, 3, 179–187.
- Leser, H. (1987), Zur Glazialproblematik auf Blatt Freiburg-Süd der Geomorphologischen Karte 1:100000 der Bundesrepublik Deutschland (GMK 100, Blatt 2), *Eiszeitalter und Gegenwart*, 37, 139–144.
- Leser, H., and D. Schaub (1987), Geomorphologische Kartierung im Hochgebirge: Ein Anwendungsbeispiel der "Grünen Legende" im MassMass 1:10.000, *Berliner Geographische Abhandlungen*, 42, 31–37.
- Letréguilly, A., and L. Reynaud (1990), Space and time distribution of glacier mass-balance in the Northern Hemisphere, *Arctic and Alpine Research*, 22(1), 43–50.

- Levermann, A., J. Bamber, S. Drijfhout, A. Ganopolski, W. Haeberli, and N. Harris (2010), Climate tipping elements with potential impacts on Europe, *Tech. rep.*, European Environmental Agency.
- Leysinger Vieli, G. J. C., and G. H. Gudmundsson (2004), On estimating length fluctuations of glaciers caused by changes in climatic forcing, *Journal of Geophysical Research*, *109*, 2156–2202.
- Li, J., J. Paden, C. Leuschen, F. Rodriguez-Morales, R. D. Hale, E. J. Arnold, R. Crowe, D. Gomez-Garcia, and P. Gogineni (2013), High-altitude radar measurements of ice thickness over the Antarctic and Greenland Ice Sheets as a part of Operation Ice Bridge, *IEEE Transactions on Geoscience and Remote Sensing*, *51*(2), 742–754.
- Lichtenhahn, C. (1973), Die Berechnung von Sperren in Beton und Eisenbeton, *Mitteilungen der forstlichen Bundes-Versuchsanstalt Wien*, *102*, 91–127.
- Lieb, G. (1986), Die Blockgletscher der östlichen Schobergruppe (Hohe Tauern, Kärnten), *Arbeiten aus dem Institut für Geographie der Karl-Franzens-Universität Graz*, *27*, 123–132.
- Lieb, G. (1987), Zur spätglazialen Gletscher- und Blockgletschergeschichte im Vergleich zwischen den Hohen und Niederen Tauern, *Mitteilungen der Österreichischen Geographischen Gesellschaft*, *129*, 5–27.
- Lieb, G. (1989), Die Seetaler Alpen (Steiermark) - Länderkundliche GrundstruktGrund und pleistazäne Landschaftsgenese, *Arbeiten aus dem Institut für Geographie der Karl-Franzens-Universität Graz*, *29*, 243–276.
- Likens, G. E., R. F. Wright, J. N. Galloway, and T. J. Butler (1979), Acid Rain, *Scientific American*, *241*(4), 39–150.
- Lliboutry, L. (1957), Banding and volcanic ash on patagonian glaciers, *Journal of Glaciology*, *3*(21), 18–25.
- Lliboutry, L. (1958), La dynamique de la Mer de Glace et la vague de 1891-95 d’après les mesures de Joseph Vallot, in *Symposium Chamonix, 16.-24. September 1958*, pp. 125–138.
- Lliboutry, L. (1975), Le cryocinegraphe peut-il déceler de petits mouvements par saccades des glaciers?, *Hydrological Sciences - Journal des Sciences Hydrologiques*, *20*(3), 365–366.
- Lopez, P., P. Chevallier, V. Favier, B. Pouyaud, F. Ordenes, and J. Oerlemans (2010), A regional view of fluctuations in glacier length in southern South America, *Global and Planetary Change*, *71*, 85–108.
- Lorenzo, J. L. (1958), Glaciologia mexicana, *Boletín Bibliográfico de Geofísica y Oceanografía*, *1*, 131–136.
- Lorius, C., J. Jouzel, C. Ritz, L. Merlivat, J. R. Petit, N. I. Barkov, Y. S. Korotkevich, and V. M. Kotlyakov (1986), Stratigraphie isotopique du dernier cycle climatique (150.000 ans) dans les sédiments glaciaires de l’Antarctique, in *Société hydrotechnique de France - Section Glaciologie*.
- Lorrain, R. D., and R. A. Souchez (1972), Sorption as a factor in the transport of major cations by meltwater from an Alpine Glacier, *Quaternary Research*, *2*, 253–256.
- Lougeay, R. (1972), Patterns of surface temperature in the alpine/periglacial environment as determined by radiometric measurements, in *Icefield ranges research project*, pp. 163–176.

- Lozej, A., I. Tabacco, M. Meneghel, G. Orombelli, C. Smiraglia, and A. Longinelli (1989), Radio-echo sounding of Enigma Lake (Northern Foothills, Victoria Land, Antarctica), *Memorie della Societa Geologica Italiana*, *46*, 103–115.
- Lucchitta, B. K., and H. M. Ferguson (1986), Antarctica: Measuring glacier velocity from satellite images, *Science*, *234*, 1105–1108.
- Lüscher, G. (1906), Die Entstehung des Grundeises, Ph.D. thesis, Universität Zürich.
- Luterbacher, J., M. A. Liniger, A. Menzel, N. Estrella, P. M. Della-Marta, C. Pfister, T. Rutishauser, and E. Xoplaki (2007), Exceptional European warmth of autumn 2006 and winter 2007: Historical context, the underunder dynamics, and its phenological impacts, *Geophysical Research Letters*, *34*, 6 pp.
- Lüthi, M. P., A. Bauder, and M. Funk (2010), Volume change reconstruction of Swiss glaciers from length change data, *Journal of Geophysical Research*, *115*, 8.
- Lütschg, O. (1926), Beobachtungen über das Verhalten des vorstossenden Allalingsletschers im Wallis, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *14*, 257–265.
- Lütschg, O. (1928), Wasserstand und Wassertemperatur der Visp in Stalden bei Visp. Wallis (Schweiz), *Geografiska Annaler*, *10*(1/2), 181–194.
- Lütschg, O. (1933), Observations sur le glacier supérieur de Grindelwald. Mouvement et érosion de 1921 à 1928, *Archives des sciences physiques et naturelles*, *15*, 201–205.
- Ma, L. L., L. D. Tian, J. C. Pu, and P. L. Wang (2010), Recent area and ice volume change of Kangwure Glacier in the middle of Himalayas, *Chinese Science Bulletin*, *55*(20), 2088–2096.
- Machguth, H., and M. Huss (2014), The length of the world’s glaciers – a new approach for the global calculation of center lines, *The Cryosphere*, *8*, 1741–1755.
- Machguth, H., F. Paul, M. Hoelzle, and W. Haeberli (2005), Application of a simple distributed mass balance model to larger glacierized catchments of the Swiss Alps, *Arctic, Antarctic and Alpine Research*, p. 20pp.
- Machguth, H., O. Eisen, F. Paul, and M. Hoelzle (2006a), Strong spatial variability of snow accumulation observed with helicopter-borne GPR on two adjacent Alpine glaciers, *Geophysical Research Letters*, *33*, L13,503, doi:10.1029/2006GL026576.
- Machguth, H., F. Paul, M. Hoelzle, and W. Haeberli (2006b), Distributed glacier mass-balance modelling as an important component of modern multi-level glacier monitoring, *Annals of Glaciology*, *43*, 335–343.
- Machguth, H., F. Paul, S. Kotlarski, and M. Hoelzle (2009), Calculating distributed glacier mass balance for the Swiss Alps from RCM output: A methodical description and interpretation of the results, *Journal of Geophysical Research*, *114*(D19), 2156–2202, doi:10.1029/2009JD011775.
- Machguth, H., W. Haeberli, and F. Paul (2012), Mass-balance parameters derived from a synthetic network of mass-balance glaciers, *Journal of Glaciology*, *58*(211), 965–979, doi:110.3189/2012JoG11J223.
- Machguth, H., et al. (2016a), Greenland surface mass-balance observations from the ice-sheet ablation area and local glaciers, *Journal of Glaciology*, *62*(235), 861–887, doi:10.1017/jog.2016.75.

- Machguth, H., et al. (2016b), Greenland meltwater storage in firn limited by near-surface ice formation, *Nature Climate Change*, 6(4), 390–393, doi:10.1038/nclimate2899.
- Maisch, M. (1988), Die Veränderungen der Gletscherflächen und Schneegrenze seit dem Hochstand von 1850 im Kanton Graubünden (Schweiz), *Geomorphologie. N. F.*, 70, 113–130.
- Maisch, M., W. Haeberli, M. Hoelzle, and J. Wenzel (1999), Occurrence of rocky and sedimentary glacier beds in the Swiss Alps as estimated from glacier-inventory data, *Annals of Glaciology*, 28, 231–235.
- Mani, P., and H. Kienholz (1988), Geomorphogenese im Gasterntal unter besonderer Berücksichtigung neuzeitlicher Gletscherschwankungen, *Geomorphologie. N. F.*, 70, 95–112.
- Marcer, M., P. A. Stentoft, E. Bierre, E. Cimoli, A. Bjørk, L. Stenseng, and H. Machguth (2017), Three decades of volume change of a small greenlandic glacier using ground penetrating radar, structure from motion, and aerial photogrammetry, *Arctic, Antarctic, and Alpine Research*, 49(3), 411–425, doi:10.1657/AAAR0016-049.
- Markl, G., and W. Ambach (1983), Messung der direkten Sonnenstrahlung und der atmosphärischen Trübung am Grönländischen Inlandeis, Station Carrefour, 1850 m, *Polarforschung*, 53, 11–16.
- Marshall, S. J., E. C. White, M. N. Demuth, T. Bolch, R. Wheate, B. Menounos, M. J. Beedle, and J. M. Shea (2011), Glacier water resources on the eastern slopes of the Canadian Rocky Mountains, *Canadian Water Resources Journal*, 36(2), 109–134, doi:10.4296/cwrj3602823.
- Martin, H. E., and W. B. Whalley (1987), Rock glaciers. Part 1: Rock glacier morphology: classification and distribution, *Progress in Physical Geography*, 1, 260–282.
- Martin, J. (1964), La marmite glaciaire des caillettes, in *Bulletin de la Murithienne*.
- Martinez, J. (1976), *Facets of Hydrology*, chap. Snow and Ice, pp. 85–118, John Wiley & Sons Ltd.
- Martinelli, B. (1990), Analysis of seismic pattern observed at Nevado del Ruiz volcano, Colombia during August–September 1985, *Journal of Volcanology and Geothermal Research*, 41, 297–314.
- Martinelli, B. (1991), Understanding triggering mechanisms of volcanoes for hazard evaluation, *Episodes. International Geoscience Newsmagazine*, 14(1), 19–25.
- Martínez, E. (1991), Observaciones geomorfológicas en el Nanga Parbat (Himalaya del Pakistan), *Ería*, 26, 157–177.
- Masiokas, M. H., A. Rivera, L. E. Espizua, R. Villalba, S. Delgado, and J. C. Aravena (2009a), Glacier fluctuations in extratropical South America during the past 1000 years, *Paleogeography, Paleoclimatology, Paleoecology*, 281, 242–268, doi:10.1016/j.palaeo.2009.08.006.
- Masiokas, M. H., B. H. Luckman, R. Villalba, S. Delgado, P. Skvarca, and A. Ripalta (2009b), Little Ice Age fluctuations of small glaciers in the Monte Fitz Roy and Lago del Desierto areas, south Patagonian Andes, Argentina, *Paleogeography, Paleoclimatology, Paleoecology*, 281, 351–562, doi:10.1016/j.palaeo.2007.10.031.
- Maurer, J. M., J. M. Schaefer, S. Rupper, and A. Corley (2019), Acceleration of ice loss across the himalayayas over the past 40 years, *Science advances*, 5, 1–12, doi:10.1126/sciadv.aav7266.
- Mayo, L. R. (1988a), Advance of Hubbard glacier and closure of Russell fiord, Alaska - Environmental effects and hazards in the Yakutat area, *U. S. Geological Survey*, p. 16 pp.

- Mayo, L. R. (1988b), History of Russell Fiord and Hubbard glacier, Alaska, *U. S. Geological Survey*.
- Mayo, L. R. (1988c), Cause of the avalanche of Hubbard glacier, Alaska, *U. S. Geological Survey*.
- Mayo, L. R. (1989), Advance of Hubbard glacier and 1986 outburst of Russell fiord, Alaska, U.S.A., *Annals of Glaciology*, 13, 189–194.
- Mayo, L. R. (1996), Hubbard glacier near Yakutat, Alaska - The ice damming and breakout of Russell fiord/lake, 1986, *U. S. Geological Survey*, pp. 42–49.
- Mayo, L. R., and D. C. Trabant (1982), *Geodetic trisection, altitude, and ice-radar surveying techniques used at Knik Glacier, Alaska, and summary of 1979, 1980, and 1981 data*, US Geological Survey.
- Mayo, L. R., M. F. Meier, and W. F. Tangborn (1972a), A system to combine stratigraphic and annual mass-balance systems: A contribution to the international hydrological decade, *Journal of Glaciology*, 11(61), 3–14.
- Mayo, L. R., M. F. Meier, and W. F. Tangborn (1972b), A system to combine stratigraphic and annual mass-balance systems: A contribution to the international hydrological decade, *Journal of Glaciology*, 11(61), 3–14.
- Mayr, F., and H. Heuberger (1968), Type areas of late glacial and post-glacial deposits in Tyrol, Eastern Alps, *University of Colorado Studies, Series in Earth Sciences*, 7, 143–165.
- Mazo, V. L. (1990), Interaction of ice sheets: Instability and self-organization, in *International symposium on glaciers-ocean-atmosphere interactions Leningrad*.
- McCall, J. G. (1952), The internal structure of a cirque glacier. Report on studies of the englacial movements and temperatures, *Journal of Glaciology*, 2(12), 122–131.
- McCann, S. B., P. J. Howarth, and J. G. Cogley (1972), Fluvial process in a periglacial environment. Queen Elizabeth Islands, N.W.T., Canada, *Transactions*, 55, 69–82.
- McDowell, B. (1962), Avalanche!, *National Geographic Magazine*, pp. 855–880.
- McVicar, T. R., and C. Körner (2013), On the use of elevation, altitude, and height in the ecological and climatological literature, *Oecologia*, 171, 335–337.
- Meade, R. H. (1982), Sources, sinks, and storage of river sediment in the Atlantic drainage of the United States, *Journal of Geology*, 90, 235–252.
- Meier, M. F. (1960), Distribution and variations of glaciers in the United States exclusive of Alaska, *International Association of Scientific Hydrology*, 54, 420–429.
- Meier, M. F. (1967), Calculations of slip of Nisqually Glacier on its bed: No simple relation of sliding velocity to shear stress, in *Extract of Commission of Snow and Ice, General Assembly of Bern*, in Nisqually Glacier folder.
- Meier, M. F. (1984), Contribution of small glaciers to global sea level, *Science*, 226(4681), 1418–1421.
- Meier, M. F. (s. a.), Some thoughts on the monitoring of large glaciers.
- Meier, M. F., and B. Schädler (1979), Die Ausaperung der Schneedecke in Abhängigkeit von Strahlung und Relief, *Archiv für Meteorologie, Geophysik und Bioklimatologie*, 27, 151–158.

- Meier, M. F., M. B. Dyurgerov, and G. J. McCabe (2003), The health of glaciers: recent changes in glacier regime, *Climatic Change*, *59*, 123–135.
- Mellor, M. (1963), Remarks concerning the Antarctic mass balance.
- Melvold, K., and J. O. Hagen (1998), Evolution of a surge-type glacier in its quiescent phase: Kongsvegen, Spitsbergen, 1964-95, *Journal of Glaciology*, *44*, 394–404 (Separatum).
- Meneghel, M. (1990), Misure preliminari sul Ghiacciaio Settentrionale di Tarn flat (Terra Vittoria, Antartide), *Geografia Fisica e Dinamica Quaternaria*, *13*(2), 183–185.
- Mennis, J. L., and A. G. Fountain (2001), A spatio-temporal GIS database for monitoring alpine glacier change, *Photogrammetric Engineering & Remote Sensing*, *67*(8), 967–975.
- Mercanton, P. L. (1858), Aires englacées et cotes frontales des glaciers suisses, *Cours d'Eau et Energie*, *12*, 1–8.
- Mercanton, P. L. (1905), Forages glaciaires, *Archives des Sciences Physiques et Naturelles*, *19*, 1–35.
- Mercanton, P.-L. (1934), La mission dano-suisse de l'année polaire au Snaefellsjokull, *Société Suisse de Géophysique, Météorologie et Astronomie*, *16*, 53–56.
- Mercanton, P. L. (1935), Le cryocinémètre de la Commission helvétique des Glaciers, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *22*, 163–171.
- Mercanton, P. L. (1950), L'exploration du glacier en profondeur, in *Comité alpin français*.
- Mercanton, P. L. (1958), Un demi-siècle d'observations nivométriques dans les Alpes suisses, *Bulletin de la Société Vaudoises des sciences naturelles*, *67*, 1–10.
- Mercanton, P.-L., and W. Jost (1928), Le "voyage" du glacier dans ses profondeurs. Une expérience /'a longue échéance, *Société Suisse de Géophysique, Météorologie et Astronomie*, *10*, 331–332, extrait du Compte rendu des séances de la G.M.A.
- Mercer, J. H. (1968), Variations of some patagonian glaciers since the late-glacial, *American Journal of Science*, *266*, 91–109.
- Mernild, S. H., D. L. Kane, B. U. Hansen, B. H. Jakobsen, B. Hasholt, and N. T. Knudsen (2008a), Climate, glacier mass balance and runoff (1993-2005) for the Mittivakkat Glacier catchment, Ammassalik Island, SE Greenland, and in a long term perspective (1898-1993), *Hydrology Research*, *39*(4), 239–256.
- Mernild, S. H., G. E. Liston, D. L. Kane, N. T. Knudsen, and B. Hasholt (2008b), Snow, runoff, and mass balance modeling for the entire Mittivakkat Glacier (1998-2006), Ammassalik Island, SE Greenland, *Geografisk Tidsskrift*, *108*(1), 121–136.
- Mernild, S. H., N. T. Knudsen, W. H. Lipscomb, J. C. Yde, J. K. Malmros, B. H. Jakobsen, and B. Hasholt (2011), Record mass loss from Greenland's best-observed local glacier, *The Cryosphere Discussions*, *5*, 461–477, doi:10.5194/tcd-5-461-2011.
- Messerli, B., and M. Zurbuchen (1968), Blockgletscher im Weissmies und Aletsch und ihre photogrammetrische Kartierung, *Die Alpen*, *3*, 1–13.
- Miles, B. W. J., C. R. Stokes, A. Vieli, and N. J. Cox (2013), Rapid, climate-driven changes in outlet glaciers on the Pacific coast of East Antarctica, *Nature*, *500*, 563–567.

- Miller, P. E., M. Kunz, J. P. Mills, M. A. King, T. Murray, T. D. James, and S. H. Marsh (2009), Assessment of glacier volume change using ASTER-based surface matching of historical photography, *IEEE Transactions on Geoscience and Remote Sensing*, *47*(7), 1971–1979.
- Milliman, J. D., and R. H. Meade (1983), World-wide delivery of river sediment to the oceans, *Journal of Geology*, *91*, 1–21.
- Mölg, T., F. Maussion, and D. Scherer (2014), Mid-latitude westerlies as a driver of glacier variability in monsoonal High Asia, *Nature Climate Change*, *4*, 68–73, doi:10.1038/nclimate2055.
- Molnia, B. F. (2007), Late nineteenth to early twenty-first century behaviour of Alaskan glaciers as indicators of changing regional climate, *Global and Planetary Change*, *56*, 23–56, doi:10.1016/j.gloplacha.2006.07.011.
- Moore, H. J., S. Liebes, D. S. Crouch, and L. V. Clark (1978), *Rock pushing and sampling under-rocks on Mars*, 21 pp., US Geological Survey.
- Mortara, G., and P. Sorzana (1987), Situazioni di rischio idrogeologico connesse all’espansione recente del ghiacciaio del Miage ed all’instabilità dei versanti in alta Val Veni (Massiccio del Monte Bianco), *Rev. Valdôtaine d’hist. naturelle*, *41*, 111–118.
- Mosimann, T. (1980), Eine Legende für die ökologische Standort- und Schadenkartierung im Bereich von Skipisten, *Natur und Landschaft*, *55*, 425–429.
- Mosimann, T. (1981), Geoökologische Standortindikatoren für die Erosionsanfälligkeit alpiner Hänge nach Geländeingriffen für Pistenanlagen, *Geomethodica*, *6*, 143–174.
- Moussavi, M. S., M. J. V. Valadan Zoej, F. Vaziri, M. R. Sahebi, and Y. Rezaei (2009), A new glacier inventory of Iran, *Annals of Glaciology*, *50*(53), 93–103.
- Müller, D. (1990), Die Hochwasserrückhaltebecken der Schweiz, *wasser, energie, luft - eau, énergie, air*, *82*, 185–188.
- Müller, F. (1969a), Seminar on the causes and mechanics of glacier surges, *Canadian Journal of Earth Sciences*, *6*(4), 3–4.
- Müller, F. (1969b), Was the Good Friday Glacier on Axel Heiberg Island surging?, *Canadian Journal of Earth Sciences*, *6*(4), 891–894.
- Müller, F. (1976), On the thermal regime of a high-arctic valley glacier, *Journal of Glaciology*, *16*(74), 119–133.
- Müller, F. (1980), Glaciers and their fluctuations, *Nature and Resources*, *16*, 5–11.
- Müller, F., and C. Ommanney (1970), The contribution of glacier ice to the world water balance (A status report on the World Glacier Inventory), in *International Association of Scientific Hydrology. Proceedings of the Reading Symposium.*, pp. 7–20.
- Müller, F., T. Catfish, and G. Müller (1977), Firn und Eis der Schweizer Alpen.
- Müller, H. (1977), Fossile Böden (fAh) in einer Schutthalde (Rotelsee, Simplon-Pass VS), *Bulletin Murithienne*, *94*, 73–83.
- Müller, H. (1983), Messungen zum aktuellen Gletschervorstoss und zur Verbreitung von Untergrundeis im Vorfeld des Rossbodegletschers (Simplon, Schweizer Alpen), *Innsbrucker Geographische Studien*, *8*, 45–57.

- Müller, H. (1985), On the radiation budget in the Alps, *Journal of Climatology*, 5, 445–462.
- Naef, F. (1981), Can we model the rainfall-runoff process today?, *Hydrological Sciences - Bulletin - des Sciences Hydrologiques*, 26(3), 281–289.
- Naef, F. (1985), How does one estimate flood peaks in small catchments in Switzerland without discharge measurements, *Beiträge zur Hydrologie*, 5, 415–428.
- Naef, F. (1989), Hydrologie des Bodensees und seiner Zuflüsse, *Vermessung, Photogrammetrie, Kulturtechnik*, 1, 15–17.
- Naef, F., and M. Jäggi (1990), Das Hochwasser vom 24./25. August 1987 im Urner Reusstal, *wasser, energie, luft - eau. énergie, air*, 82(9), 222–227.
- Nagl, H. (1971), Zur Erkenntnis quartärer Klimaschwankungen aus geomorphologischen Erscheinungen am Beispiel des Pöllatals (Hafnergruppe, Kärnten), *Carinthia II*, 161, 9–30.
- Nakawo, M., Y. Fujii, and M. L. Shrestha (1976a), Flow of glaciers in Hidden Valley, Mukut Himal, *Seppyo*, 38, 39–44.
- Nakawo, M., Y. Fujii, and M. L. Shrestha (1976b), Water discharge of Rikha Samba Khola in Hidden Valley, Mukut Himal, *Seppyo*, 38, 27–30.
- Naruse, R., and P. Skvarca (s. a.), Thickening trend of Perito Moreno Glacier, southern Patagonia, in the 1990s, pp. 153–157.
- Neave, K. G., and J. C. Savage (1970), Icequakes on the Athabasca Glacier, *Journal of Geophysical Research*, 75(8), 1351–1362.
- Nemec, J., P. Huybrechts, O. Rybak, and J. Oerlemans (2009), Reconstruction of the annual balance of Vadret da Morteratsch, Switzerland, since 1865, *Annals of Glaciology*, 50, 126–134.
- Neumann, J. (1985), Climatic change as a topic in the classical greek and roman literature, *Climatic Change*, 7, 441–454.
- Neumann, J. (1992), Climatic conditions in the Alps in the years about the year of Hannibal’s crossing (218 BC), *Climatic Change*, 22, 139–150.
- Neumann, J., and S. Parpola (1987), Climatic change and the eleventh-tenth-century eclipse of Assyria and Babylonia, *Journal of Near Eastern Studies*, 46, 161–182.
- Nick, F. M., A. Vieli, I. M. Howat, and I. Joughin (2009), Large-scale changes in Greenland outlet glacier dynamics triggered at the terminus, *Nature Geoscience*, 2, 110–114, doi:10.1038/ngeo394.
- Nicolussi, K. (1994), Jahrringe und Massenbilanz. Dendroklimatologische Rekonstruktion der Massenbilanzreihe des Hintereisferners bis zum Jahr 1400 mittels Pinus cembra-Reihen aus den Ötztaler Alpen, Tirol, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 30, 11–52.
- Noël, B., et al. (2017), A tipping point in refreezing accelerates mass loss of greenland’s glaciers and ice caps, *Nature Communications*, 8, 14,730, doi:10.1038/ncomms14730.
- Noetzli, J., M. Hoelzle, and W. Haeberli (2003), *Permafrost: proceedings of the eighth International Conference on Permafrost. Lisse, The Netherlands*, chap. Mountain permafrost and recent Alpine rock-fall event: a GIS-based approach to determine critical factors, pp. 827–832, Institute of Geography University Zurich, doi:http://dx.doi.org/10.5167/uzh-33321.

- Noetzli, J., C. Huggel, M. Hoelzle, and W. Haeberli (2006), GIS-based modelling of rock-ice avalanches from Alpine permafrost areas, *Computational Geosciences*, *10*, 161–178, doi:10.1007/s10596-005-9017-z.
- Nolin, A. W., and J. Dozier (2000), A hyperspectral method for remotely sensing the grain size of snow, *Remote Sensing of the Environment*, *74*, 207–216.
- Nussbaumer, S. U., and H. J. Zumbühl (2012), The Little Ice Age history of the Glacier des Bossons (Mont Blanc massif, France): a new high-resolution glacier length curve based on historical documents, *Climatic Change*, *111*, 301–334, doi:10.1007/s10584-011-0130-9.
- Nussbaumer, S. U., et al. (2011), Alpine climate during the Holocene: a comparison between records of glaciers, lake sediments and solar activity, *Journal of Quaternary Science*, *26*(7), 703–713, doi:10.1002/jqs.1495.
- Nuth, C., and A. Kääb (2011), Co-registration and bias correction of satellite elevation data sets for quantifying glacier thickness change, *The Cryosphere*, *5*, 271–290, doi:10.5194/tc-5-271-2011.
- Nye, J. F. (1963), The response of a glacier to changes in the rate of nourishment and wastage, *Proceedings of the Royal Society of London*, *275*, 87–112.
- Ødegård, R. S., S.-E. Hamran, P. H. Bø, B. Etzelmüller, G. Vatne, and J. L. Sollid (1992), Thermal regime of a Vavall glacier, Erikbreen, northern Spitsbergen, *Polar Research*, *11*, 69–79.
- Oerlemans, J. (1988), Simulation of historic glacier variations with a simple climate-glacier model, *Journal of Glaciology*, *34*(118), 333–341.
- Oerlemans, J. (1989a), Monitoring glaciers to detect climatic change, in *Discussion paper for LICC (December 1989)*.
- Oerlemans, J. (1989b), On the response of valley glaciers to climatic change, *Glacier Fluctuations and Climatic Change. Glaciology and Quaternary Geology*, *6*, 353–371.
- Oerlemans, J. (1991/1992), A model for the surface balance of ice masses: part 1. Alpine glaciers, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *27/28*, 63–83.
- Oerlemans, J. (1992), Climate sensitivity of glaciers in southern Norway: application of an energy-balance model to Nigardsbreen, Hellstugubreen and Alftobreen, *Journal of Glaciology*, *38*(129), 223–232.
- Oerlemans, J. (1994), Quantifying global warming from the retreat of glaciers, *Science*, *264*, 243–245.
- Oerlemans, J. (2005), Extracting a climate signal from 169 glacier records, *Science*, *308*(5722), 675–677, doi:10.1126/science.1107046.
- Oerlemans, J. (2013), A note on the water budget of temperate glaciers, *The Cryosphere*, *7*(5), 1557–1564.
- Oerlemans, J., and J. P. F. Fortuin (1992), Sensitivity of glaciers and small ice caps to greenhouse warming, *Science*, *258*, 115–117.
- Oerlemans, J., and N. C. Hoogendoorn (1989), Mass-balance gradients and climatic change, *Journal of Glaciology*, *35*(121), 399–405.

- Oerlemans, J., and B. K. Reichert (2000), Relating glacier mass balance to meteorological data by using a seasonal sensitivity characteristic, *Journal of Glaciology*, *46*(152), 1–6.
- Oerlemans, J., et al. (1998), Modelling the response of glaciers to climate warming, *Climate Dynamics*, *14*, 267–274.
- Oerlemans, J., M. B. Dyurgerov, and R. S. W. Van de Wal (2007a), Reconstructing the glacier contribution to sea-level rise back to 1850, *The Cryosphere*, *1*, 59–65.
- Oerlemans, J., M. B. Dyurgerov, and R. S. W. Van de Wal (2007b), Reconstructing the glacier contribution to sea-level rise back to 1850, *The Cryosphere Discussions*, *1*, 77–97.
- Oeschger, H. (1975), Umweltisotopenanalyse Isotope in Hydrologie und Glaziologie, *Physikalische Blätter*, *31*, 616–625.
- Oeschger, H., A. Renaud, and E. Schumacher (1962), Essai de datage par le Tritium des couches de névé du Jungfraufirn et détermination de l'accumulation annuelle, *Bulletin de la Société vaudoise des sciences naturelles*, *306*, 49–56.
- Oeschger, H., U. Schotterer, B. Stauffer, W. Haerberli, and H. Röthlisberger (1977), First results from alpine core drilling projects, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *13*(1/2), 193–208.
- Ohmura, A. (2001), Physical basis for the temperature-based melt-index method, *Journal of Applied Meteorology*, *40*, 753–761, doi:10.1175/1520-0450(2001)040<0753:PBFTTB>2.0.CO;2.
- Ohmura, A. (2006), Changes in mountain glaciers and ice caps during the 20th century, *Annals of Glaciology*, *43*, 361–368.
- Ohmura, A. (2011), Observed mass balance of mountain glaciers and Greenland Ice Sheet in the 20th century and the present trends, *Surveys in Geophysics*, *32*(4-5), 537–534, doi:10.1007/s10712-011-9124-4.
- Ohmura, A., P. Kasser, and M. Funk (1986), Parametrization of glacierization for a climate model, in *Proceedings of ISLSCP Conference, Rome, Italy, 2-6 December 1985*.
- Ohmura, A., P. Kasser, and M. Funk (1992), Climate at the equilibrium line of glaciers, *Journal of Glaciology*, *38*(130), 397–411.
- Olsen, K. (1982), Die 1. Chinesisch-deutsche Tibet-Expedition 1981, in *Sitzungsberichte und Mitteilungen der Braunschweigischen Wissenschaftlichen Gesellschaft*.
- Olszewski, A., and J. Szupryczynski (1980), Texture of recent morainic deposits of a terminal zone of the Werenskiöld Glacier (Spitsbergen), *Polish Polar Research*, *1*(2-3), 45–74.
- Ommanney, C. S. L. (1995), 100 years of glacier observation in Canada, *Geografia Fisica e Dinamica Quaternaria*, *18*, 321–330.
- Orombelli, G. (1986), La prima spedizione del programma nazionale di ricerche in Antartide, *Rivista Geografica Italiana*, *93*, 129–169.
- Orombelli, G. (1987), Nuove datazione ¹⁴C per il quaternario superiore delle Alpe Centrali, *Natura Bresciana*, *23*, 343–346.
- Orombelli, G. (2005), Il Ghiacciaio del Ruitor (Valle d'Aosta) nella piccola età glaciale, *Geografia Fisica e Dinamica Quaternaria*, *7*, 239–251.

- Orombelli, G., C. Baroni, and H. Denton (1990), Late cenozoic glacial history of the Terra Nova Bay Region, Northern Victoria Land, Antarctica, *Geografica Fisica e Dinamica Quaternaria*, 13, 139–163.
- Ostanin, O. V., and N. N. Mikhailov (2005), Altai glacier changes since the end of the 19th century. 21st century development tendencies, in *Ice and Climate News*, No. 6, August 2005.
- Østrem, G. (1963), Comparative crystallographic studies on ice-cored moraines, snow-banks and glaciers, *Geografiska Annaler*, 45(4), 210–240.
- Østrem, G. (1972), Height of the glaciation level in Northern British Columbia and Southeastern Alaska, *Geografiska Annaler*, 54, 76–84.
- Østrem, G. (1985a), Snow and ice – Remote Sensing Applications in civil engineering, *Meddelelse fra Hydrologisk Adveling*, 49, reprint from Proceedings of the Postgraduate Summer School held at the University of Dundee 19 Aug. – 8 Sept. 1984.
- Østrem, G. (1985b), Snow and ice - remote sensing applications in civil engineering, in *Proceeding of the Postgraduate Summer School held at the University of Dundee, 19. Aug. - 8. Sept. 1984*, pp. 151–163.
- Østrem, G. (1986a), Repeated glacier mapping for hydrological purposes: Water power planning, *Meddelelse fra Hydrologisk Adveling*, 52, reprint from Annals of Glaciology, vol. 8 (p. 135-140).
- Østrem, G. (1986b), Repeated glacier mapping for hydrological purposes: Water power planning, *Annals of Glaciology*, 8, 135–140.
- Østrem, G., and K. Arnold (1970), Ice-cored moraines in Southern British Columbia and Alberta, Canada, *Geografiska Annaler*, 52, 120–128.
- Østrem, G., and H. Olsen (1987a), Sedimentation in a glacier lake, *Geografiska Annaler*, 69, 123–138.
- Østrem, G., and H. C. Olsen (1987b), Sedimentation in a glacier lake, *Meddelelse fra Hydrologisk Adveling*, 57, reprint from Geografiska Annaler Vol. 69A, p. 123-138.
- Østrem, G., and A. Tvede (1986a), Comparison of glacier maps – a source of climatological information?, *Meddelelse fra Hydrologisk Adveling*, 53, reprint from Geografiska Annaler Vol. 68A, p. 225-231.
- Østrem, G., and A. Tvede (1986b), Comparison of glacier maps - a source of climatological information?, *Geografiska Annaler*, 68, 225–231.
- Østrem, G., N. Haakensen, and T. Eriksson (1981), The glaciation level in Southern Alaska, *Geografiska Annaler*, 63, 251–260.
- Outcalt, S. I., and J. B. Benedict (1965), Photo-interpretation of two types of rock glacier in the Colorado Front Range, U.S.A., *Journal of Glaciology*, 5(42), 849–856.
- Owen, L. A., G. Thackray, R. S. Anderson, J. Briner, D. Kaufman, G. Roe, W. T. Pfeffer, and C. Yi (2009), Integrated research on mountain glaciers: Current status, priorities and future prospects, *Geomorphology*, 103, 158–171, doi:10.1016/j.geomorph.2008.04.019.
- Painter, T. H., M. G. Flanner, G. Kaser, B. Marzeion, R. A. VanCuren, and W. Abdalati (2013), End of the Little Ice Age in the Alps forced by Industrial black carbon, in *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1302570110.

- Pancza, A., and J. Ozouf (1988), Contemporary frost action on different oriented rock walls: an example from the Swiss Jura mountains, in *International Conference on Permafrost Proceedings*, pp. 830–833.
- Paterson, W. S. B. (1980), *Dynamics of snow and ice masses*, chap. Ice sheets and ice shelves, pp. 1–78, Academic Press.
- Paterson, W. S. B., and E. D. Waddington (1984), Past precipitation rates derived from ice core measurements: Methods and data analysis, *Reviews of Geophysics and Space Physics*, 22(2), 123–130.
- Patzelt, G. (1973), Die neuzeitlichen Gletscherschwankungen in der Venedigergruppe (Hohe Tauern, Ostalpen), *Zeitschrift für Gletscherkunde und Glazialgeologie*, 9(1-2), 5–57.
- Patzelt, G. (1975), Die Gletscher des inneren Pitztales, in *Hochwasser und Lawinenschutz in Tirol*, pp. 244–250.
- Patzelt, G. (1981), Die Gletscher der Österreichischen Alpen 1980/81, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 17(2), 227–240.
- Patzelt, G. (1984), Die Gletscher der österreichischen Alpen 1983/84, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 20, 207–221.
- Patzelt, G. (1985), The period of glacier advances in the Alps, 1965 to 1980, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 21, 403–407.
- Patzelt, G. (1987), Gegenwärtige Veränderungen an Gebirgsgletschern im weltweiten Vergleich, *Verhandlungen des Deutschen Geographentags*, 43, 259–264.
- Patzelt, G., and S. Bortenschlager (1973), Die postglazialen Gletscher- und Klimaschwankungen in der Venedigergruppe (Hohe Tauern, Ostalpen), *Geomorphologie. N. F.*, 16, 25–72.
- Patzelt, G., and W. Resch (1986), Quartärgeologie des mittleren Tiroler Inntales zwischen Innsbruck und Baumkirchen (Exkursion C am 3. April 1986), *Jahresbericht Mitteilungen des Ober-rheinischen Geologischen Vereins*, 68, 43–66.
- Patzelt, G., and H. Slupetzky (1970), Die Vertikalkomponente der Gletscherbewegung auf der Pasterze 1968–69 und ihr Einfluss auf die Berechnung der Massenbilanz, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 6(1-2), 119–127.
- Patzelt, G., E. Schneider, and G. Moser (1984), Der Lewis-Gletscher, Mount Kenya. Begleitworte zur Gletscherkarte 1983, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 20, 177–195.
- Paul, F. (2002), The new remote sensing derived Swiss glacier inventory, *Annals of Glaciology*, 34, 355–361.
- Paul, F., and W. Haeberli (2008a), Spatial variability of glacier elevation changes in the Swiss Alps obtained from two digital elevation models, *Geophysical Research Letters*, 35(21), L21,502, doi:10.1029/2008GL034718, doi:10.1029/2008GL034718.
- Paul, F., and W. Haeberli (2008b), Spatial variability of glacier elevation changes in the Swiss Alps obtained from two digital elevation models, *Geophysical Research Letters*, 35, L21,502, doi:10.1029/2008GL034718.

- Paul, F., and A. Kääb (2005), Perspectives on the production of a glacier inventory from multispectral satellite data in Arctic Canada: Cumberland Peninsula, Baffin Island, *Annals of Glaciology*, *42*, 59–66.
- Paul, F., and N. Mölg (2014), Hasty retreat of glaciers in northern Patagonia from 1985 to 2011, *Journal of Glaciology*, *60*(224), 1033–1043.
- Paul, F., H. Frey, and R. Le Bris (2001), A new glacier inventory for the European Alps from Landsat TM scenes of 2003: challenges and results, *Annals of Glaciology*, *52*(59), 144–152.
- Paul, F., A. Kääb, M. Maisch, T. Kellenberger, and W. Haeberli (2004a), Rapid disintegration of Alpine glaciers observed with satellite data, *Geophysical Research Letters*, *31*, L21,402, doi: 10.1029/2004GL020816.
- Paul, F., A. Kääb, M. Maisch, T. Kellenberger, and W. Haeberli (2004b), Rapid disintegration of Alpine glaciers observed with satellite data, *Geophysical Research Letters*, *31*, L21,402, doi: 10.1029/2004GL020816.
- Paul, F., C. Huggel, and A. Kääb (2004c), Combining satellite multispectral image data and a digital elevation model for mapping debris-covered glaciers, *Remote Sensing of the Environment*, *89*, 510–518.
- Paul, F., M. Maisch, C. Rothenbühler, M. Hoelzle, and W. Haeberli (2007a), Calculation and visualisation of future glacier extent in the Swiss Alps by means of hypsographic modelling, *Global and Planetary Change*, *55*, 343–357.
- Paul, F., A. Kääb, and W. Haeberli (2007b), Recent glacier changes in the Alps observed by satellite: Consequences for future monitoring strategies, *Global and Planetary Change*, *56*, 111–122.
- Paul, F., A. Kääb, H. Rott, A. Shepherd, T. Strozzi, and E. Volden (2009a), GlobGlacier: A new ESA project to map the world’s glaciers and ice caps from space, *EARSEL Proceedings*, *8*(1), 11–25.
- Paul, F., H. Escher-Vetter, and H. Machguth (2009b), Comparison of mass balances for Vernagtferner, Oetztal Alps, as obtained from direct measurements and distributed modelling, *Annals of Glaciology*, *50*, 169–177.
- Pavoni, N. (1961), Faltung durch Horizontalverschiebung, *Eclogae Geologicae Helveticae*, *54*(2), 515–534.
- Pavoni, N. (1971a), Recent and late cenozoic movements of the earth’s crust, *Recent Crustal Movements*, *9*, 7–17.
- Pavoni, N. (1971b), Gesetzmässigkeiten in der Anordnung ozeanischer Rücken, *Umschau in Wissenschaft und Technik*, *9*, 318–319.
- Pavoni, N. (1975), Zur Seismotektonik des Westalpenbogens, *Vermessung, Photogrammetrie, Kulturtechnik*, *3*, 185–187.
- Pavoni, N. (1990), Bipolarität in der Struktur und Dynamik des Erdmantels, *Neue Zürcher Zeitung*, *55*, 73–74.
- Peduzzi, P., C. Herold, and W. Silverio (2010), Assessing high altitude glacier thickness, volume and area changes using field, GIS and remote sensing techniques: the case of Nevado Coropuna (Peru), *The Cryosphere*, *4*, 313–323, doi:10.5194/tc-4-313-2010.

- Pelfini, M. (1994), Equilibrium line altitude (ELA) variations recorded by Ortles-Cevedale Glaciers (Lombardy, Italy) from Little Ice Age to present, *Geografia Fisica e Dinamica Quaternaria*, 17, 197–206.
- Pelto, M. S. (2006), The current disequilibrium of North Cascade glaciers, *Hydrological Processes*, 20, 769–779, doi:10.1002/hyp.6132.
- Pérez, F. L. (1989), Talus fabric and particle morphology on Lassen Peak, California, *Geografiska Annaler*, 71, 43–57.
- Peschke, W. (1998), Erste Ergebnisse einer Auswertung der Längenänderungsdaten der Schweizer Messnetzgletscher, *Tech. rep.*, ETH Zürich.
- Peterson, J. A., C. G. S. Hope, and R. Mitton (1973), Recession of snow and ice fields of Irian Jaya, Republic of Indonesia, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 9(1-2), 73–87.
- Péwé, T. L. (1957), Permafrost and its effect on life in the north, in *Arctic Biology*, pp. 12–25.
- Péwé, T. L. (1989), *Geologic evolution of Arizona*, chap. Environmental geology of Arizona, pp. 841–861, Arizona Geological Society.
- Pfeffer, W. T., et al. (2014), The Randolph Glacier Inventory : a global complete inventory of glaciers, *Journal of Glaciology*, 60(221), 537–552.
- Pfister, C. (2005), *Kulturelle Konsequenzen der "Kleinen Eiszeit"*, chap. Weeping in the Snow, pp. 31–86, Vandenhoeck & Ruprecht.
- Pfister, C., and P. Messerli (1993), *The earth as transformed by human action. Global and regional changes in the biosphere over the past 300 years*, chap. Switzerland, pp. 641–652, Cambridge University Press with Clarke University.
- Piermattei, L., L. Carturan, F. de Blasi, P. Tarolli, G. Dalla Fontana, A. Vettore, and N. Pfeifer (2016), Suitability of ground-based SfM–MVS for monitoring glacial and periglacial processes, *Earth Surface Dynamics*, 4(2), 425–443.
- Pissart, A., and P. Lambot (1989), Les mouvements actuels du sol en Belgique: Comparaison de deux nivellements Ign (1946-1948 et 1976-1980), *Annales de la Société Géologique de Belgique*, 112, 495–504.
- Plewes, L. A., and B. Hubbard (2001), A review of the use of radio-echo sounding in glaciology, *Progress in Physical Geography*, 25(2), 203–236.
- Plummer, M. A., and F. M. Phillips (2003), A 2-D numerical model of snow/ice energy balance and ice flow for paleoclimatic interpretation of glacial geomorphic features, *Quaternary Science Reviews*, 22, 1389–1406.
- Pope, A., T. Murray, and A. Luckman (2007), DEM quality assessment for quantification of glacier surface change, *Annals of Glaciology*, 46, 189–194.
- Popovnin, V. V., T. A. Danilova, and D. A. Petrakov (1999), A pioneer mass balance estimate for a Patagonian glacier: Glaciar de los Tres, Argentina, *Global and Planetary Change*, 22, 255–267.
- Post, A. (1969), Distribution of surging glaciers in Western North America, *Journal of Glaciology*, 8(53), 229–240.

- Poveda, G., and K. Pineda (2009), Reassessment of Colombia’s tropical glaciers retreat rates: are they bound to dissappear during the 2010-2020 decade?, *Advances in Geosciences*, *22*, 107–116.
- Pritchard, H. D. (2017), Asia’s glaciers are a regionally important buffer against drought, *Nature*, *545*(7653), 169–174, doi:10.1038/nature22062.
- Prodi, F., and G. Fea (1978), Transport and deposition of Saharan dust over Alps, in *Verhandlungen der funfzehnten internationalen Tagung für alpine Meteorologie*.
- Prohaska, F., and C. Thams (1940), Neue Untersuchungen über die Strahlungseigenschaften der Schneedecke, *Helvetica Physica Acta*, *13*, 21–44.
- Pugin, A. (1989), Déglaciation dans la vallée préalpine de la Sarine en Gruyère: une analyse sédimentologique, *Eclogae Geologicae Helveticae*, *82*, 285–324.
- Pugin, A. (1991), Sequences sedimentaires glaciaires dans le Seeland et le Mittelland bernois et soleurois, *Eclogae Geologicae Helveticae*, *84*(1), 177–205.
- Rabassa, J. (1982), Stratigraphy of the glacial deposits in Northern James Ross Island, Antarctic Peninsula, in *INQUA Symposia of the Genesis and Lithology of Quaternary Deposits/ USA 1981 / Argentina 1982*, pp. 329–340.
- Rabatel, A., et al. (2013), Current state of glaciers in the tropical Andes: a multi-century perspective on glacier evolution and climate change, *The Cryosphere*, *7*, 81–102, doi:10.5194/tc-7-81-2013.
- Racoviteanu, A. E., Y. Arnaud, M. W. Williams, and J. Ordonez (2008), Decadal changes in glacier parameters in the Cordillera Blanca, Peru, derived from remote sensing, *Journal of Glaciology*, *54*(186), 499–510.
- Ract-Madoux, M., and M. Reynaud (1951), L’exploration des glaciers en profondeur. Travaux de la mer de glace, *La Houille Blanche*, exposé par M. Ract-Madoux à la Sous-Section de Glaciologie, le 22 Novembre 1950.
- Radic, V., and R. Hock (2010), Regional and global volumes of glaciers derived from statistical upscaling of glacier inventory data, *Journal of Geophysical Research*, *115*, F01,010, doi:10.1029/2009JF001373.
- Radic, V., and R. Hock (2011), Regionally differentiated contribution of mountain glaciers and ice caps to future sea-level rise, *Nature Geoscience*, *4*, 91–94, doi:10.1038/ngeo1052.
- Radic, V., A. Bliss, A. C. Beedlow, R. Hock, E. Miles, and J. G. Cogley (2014), Regional and global projections of twenty-first century glacier mass changes in response to climate scenarios from global climate models, *Climate Dynamics*, *42*(1-2), 37–58.
- Radok, U. (1997), The International Commission on Snow and Ice (ICSI) and its precursors, 1894-1994, *Hydrological Sciences - Bulletin - des Sciences Hydrologiques*, *42*(2), 131–140.
- Raemy, F., and A. Huber (1990), Erosion de la rive sud du lac de Neuchâtel, *wasser, energie, luft - eau, énergie, air*, *82*(10), 286–290.
- Ramsankaran, R., A. Pandit, and A. Parla (2018), Decadal Estimates of Surface Mass Balance for Glaciers in Chandra Basin, Western Himalayas, India—A Geodetic Approach, *Climate Change Signals and Response: A Strategic Knowledge Compendium for India*, p. 109.

- Raper, S. C. B., and R. Braithwaite (2005), The potential for sea level rise: New estimates from glacier and ice cap area and volume distributions, *Geophysical Research Letters*, *32*, L05,502.
- Raper, S. C. B., and R. Braithwaite (2006), Low sea level rise projections from mountain glaciers and icecaps under global warming, *Nature*, *439*, 311–313.
- Rapp, A. (1961), Studies on the postglacial development of mountain slopes, in *Meddelanden fran Uppsala Universitets Geografiska Institution Nr. 159*.
- Rappol, M., S. Haldorsen, P. Jørgensen, J. J. M. Van der Meer, and H. M. P. Stoltenberg (1989), Composition and origin of petrographically-stratified thick till in the northern Netherlands and a saalian glaciation model for the North Sea Basin, *Meded. Werkgr. Tert. Kwart. Geol.*, *26*(2), 31–64.
- Rasmussen, L. A. (1986a), Estimating atmospheric refraction over Columbia Glacier, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *22*(1), 61–72.
- Rasmussen, L. A. (1986b), Refraction correction for radio echo-sounding of ice over ice by firn, *Journal of Glaciology*, *32*(111), 192–194.
- Rasmussen, L. A. (2009), South Cascade glacier mass balance, 1935–2006, *Annals of Glaciology*, *50*, 215–220.
- Raymond, C., T. A. Neumann, E. Rignot, K. Echelmeyer, A. Rivera, and G. Casassa (2005), Retreat of Glaciar Tyndall, Patagonia, over the last half-century, *Journal of Glaciology*, *51*(173), 239–245.
- Reimann, R. (1979), Gletscherbewegungsmessgerät, *Material und Technik*, *7*(4), 182–186.
- Reinhardt, W., and H. Rentsch (1986), Determination of changes in volume and elevation of glaciers using digital elevation models for the Vernagtferner, Ötztal Alps, Austria, *Annals of Glaciology*, *8*, 151–155.
- Renaud, A. (1936), Les entonnoirs du glacier de Gorner, *Denkschriften der Schweizerischen Naturforschenden Gesellschaft*, *71*, 27.
- René, P. (2002), Activités glaciologiques dans les Pyrénées françaises en 2001, *Société Hydrotechnique de France*, pp. 1–8.
- Reuter, H. I., K. C. Kersebaum, and O. Wendroth (2005), Modelling of solar radiation influenced by topographic shading - evaluation and application for precision farming, *Physics and Chemistry of the Earth*, *30*, 143–149.
- Revelle, R. R. (1983), *Changing Climate: Report of Carbon Dioxide Assessment Committee*, chap. Probable future changes in sea level resulting from increased atmospheric carbon dioxide, pp. 433–448, National Academy Press.
- Reynaud, L. (1975), Mouvements du glacier en surface sur une courte échelle de temps, *Hydrological Sciences - Bulletin - des Sciences Hydrologiques*, *20*, 329–339.
- Reynaud, L. (1979), Reconstruction of past velocities of Mer de Glace using forbes bands, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *15*(2), 149–163.
- Reynaud, L. (1988), Alpine glacier fluctuations and climatic changes over the last century, *Mitteilungen der Versuchsanstalt für Wasserbau und Erdbau, ETHZ*, *94*, 127–146.

- Ricker, K., and W. Tupper (1996), Overlord and Wedgemount Glaciers - A century of shrinkage, *B.C. Mountaineer Journal*, p. 5.
- Riezebos, P. A., et al. (1986), Products and effects of modern eolian activity on a nineteenth-century glacier-pushed ridge in Western Spitsbergen, Svalbard, *Arctic and Alpine Research*, *18*, 389–396.
- Rignot, E., A. Rivera, and G. Casassa (2003), Contribution of the Patagonia Icefields of South America to sea level rise, *Science*, *302*, 434–437.
- Rivera, A., G. Casassa, C. Acuña, and H. Lange (2000), Variaciones recientes de glaciares en Chile, *Investigaciones geográficas de la Universidad de Chile*, *34*, 29–60.
- Robin, G. d. Q. (1955), Ice movement and temperature distribution in glaciers and ice sheets, *Journal of Glaciology*, *2*(18), 523–532.
- Rolshoven, M. (1976), Aktive Frostmusterung in Augsburg, *Eiszeitalter und Gegenwart*, *27*, 189–192.
- Rolshoven, M. (1977), Aktualgeomorphologische Höhenstufen - ein Vergleich aus Ost- und Westalpen, *Mitteilungen der Geographischen Gesellschaft in München*, *62*, 103–111.
- Rolstad, C., T. Haug, and B. Denby (2009), Spatially integrated geodetic glacier mass balance and its uncertainty based on geostatistical analysis: application to the western Svartisen ice cap, Norway, *Journal of Glaciology*, *55*(192), 666–680.
- Rostom, R., and S. Hastenrath (2007), Variations of Mount Kenya's glaciers 1993-2004, *Erdkunde*, *61* (3), 277–283, doi:10.3112/erdkunde.2007.03.05.
- Rostom, R. S., and S. Hastenrath (1994), Variations of Mount Kenya's glaciers 1987-1993, *Erdkunde*, *48*, 174–180.
- Rostom, R. S., and S. Hastenrath (1995), Mapping the glaciers of Mount Kenya in 1947, *Erdkunde*, *49*, 244–250.
- Röthlisberger, F., P. Haas, H. Holzhauser, W. Keller, W. Bircher, and F. Renner (1980), Holocene climatic fluctuations – radiocarbon dating of fossil soils and woods from moraines and glaciers in the alps, *Geographica Helvetica*.
- Röthlisberger, G. (1992), Unwetterschäden in der Schweiz im Jahre 1991, *Wasser, Energie, Luft - eau, énergie, air*, *84*(3/4), 37–41.
- Röthlisberger, H. (1955), Studies in glacier physics on the Penny Ice Cap, Baffin Island, 1953. Part III: Seismic Sounding, *Journal of Glaciology*, *2*(18), 539–552.
- Röthlisberger, H. (1963), The Rhone Glacier Surveys, *Bulletin I.A.S.H.*, *8*(2), 119–121.
- Röthlisberger, H. (1968a), Erosive processes which are likely to accentuate or reduce the bottom relief of valley glaciers, in *Commission of Snow and Ice. General Assembly of Bern, Sept.-Oct. 1967*.
- Röthlisberger, H. (1968b), Das Problem der Tragfähigkeit der Eisdecke anlässlich der Zürcher Seegfrörni 1963, *Schweizerische Bauzeitung*, *86*(31), 565–569.
- Röthlisberger, H. (1972), Water pressure in intra- and subglacial channels, *Journal of Glaciology*, *11*(62), 177–203.

- Röthlisberger, H., and H. Lang (1987), *Glacio-fluvial Sediment Transfer*, chap. Glacial Hydrology, pp. 207–284, John Wiley & Sons Ltd.
- Rudolph, R. (1961), Die Eisablation auf dem Hintereisferner im Haushaltsjahr 1953/54, in *58.-59. Jahresbericht des Sonnblick-Vereines 1960-1961*.
- Rutsch, R. F., and C. Schlüchter (1973), Stratigraphische Gliederung der Molasse im bernischen Mittelland, *Mitteilungen der Naturforschenden Gesellschaft Bern*, *30*, 86–90.
- Rutter, N. W. (1965), Foliation pattern of Gulkana Glacier, Alaska Range, Alaska, *Journal of Glaciology*, *5*(41), 711–718.
- Rybach, L. (1990), Determination of thermal water circulation depth, with examples from the Valaisan Alps, Switzerland, in *Memoires of the 22nd Congress of IAH*.
- Rybach, L., and L. Hauber (1990), Swiss geothermal energy update 1985-1990, *U.S. Geothermal Resource Council TRANSACTIONS*, *14*, 239–246.
- Rybach, L., and F. Medici (1989), *Radon und Strahlenbiologie der Lunge*, chap. Geologische Aspekte der Radon-Strahlenbelastung in der Schweiz, pp. 63–79, Paul Scherrer Institut.
- Rybach, L., D. Werner, S. Mueller, and G. Berset (1977), Heat flow, heat production and crustal dynamics in the Central Alps, Switzerland, *Tectonophysics*, *41*, 113–126.
- Rybach, L., J. Hännly, and W. Werner (1979), Möglichkeiten und Grenzen der Nutzung geothermischer Energie in der Schweiz, *Technische Rundschau*, *61*, 141–150.
- s. n. (s. a.), Nigardsbreen, Norway. Water discharge and sediment transport, pp. 27–33.
- Sager, R. C. (1951), Aerial analysis of permanently frozen ground, in *Photogrammetric engineering*, pp. 551–571.
- Sailer, R., H. Kerschner, and A. Heller (1999), Three-dimensional reconstruction of Younger Dryas glaciers with a raster-based GIS, *Glacial Geology and Geomorphology*.
- Salzmann, N., A. Kääh, C. Huggel, B. Allgöwer, and W. Haeberli (2004), Assessment of the hazard potential of ice avalanches using remote sensing and GIS-modelling, *Norsk Geografisk Tidsskrift*, *58*, 74–84.
- Salzmann, N., S. Gruber, M. Hugentobler, and M. Hoelzle (2007), Influence of different digital terrain model (DTMs) on alpine permafrost modelling, *Environ Model Assess*, *12*, 303–313.
- Salzmann, N., H. Machguth, and A. Linsbauer (2012), The Swiss Alpine glaciers' response to the global '2°C air temperature target', *Environmental Research Letters*, *7*, 12pp.
- Sass, J. H., and A. H. Lachenbruch (1971), Uniform heat flow in a deep hole in the Canadian shield and its paleoclimatic implications, *Journal of Geophysical Research*, *76*(35), 8586–8596.
- Schädler, B., and F. Koch (1981), Schneedecke automatisch erfasst, *Wasser, Energie, Luft - eau, énergie, air*, *73*(1/2), 15–16.
- Schälchli, U. (1995), Basic equation for siltation of riverbeds, *Journal of Hydraulic Engineering*, *121*(3), 274–287.
- Scheidegger, A. E. (1979a), On the tectonics of the Western Himalaya, *Archiv für Meteorologie, Geophysik und Bioklimatologie*, *28*, 98–106.

- Scheidegger, A. E. (1979b), Orientationsstruktur der Talanlagen in der Schweiz, *Geographica Helvetica*, 34(1), 1–8.
- Scheller, E., and T. Müller (1971), Ein Beispiel zur refraktionsseismischen Bestimmung der Felsoberfläche unter geringer Überdeckung, *Schweizerische Bauzeitung*, 30, 2–4.
- Scherler, D., B. Bookhagen, and M. R. Strecker (2011), Spatially variable response of Himalayan glaciers to climate change affected by debris cover, *Nature Geoscience*, 4, 256–259, doi:10.1038/ngeo1068.
- Schindler, C. (1971), Geologie von Zürich und ihre Beziehung zu Seespiegelschwankungen, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 116(2), 283–315.
- Schindler, C., H. Röthlisberger, and M. Gyger (1978), Glaziale Stauchung in den Niederterrassen-Schottern des Aadorfer Feldes und ihre Deutung, *Eclogae Geologicae Helveticae*, 71(1), 159–174.
- Schlosser, E. (2000), Möglichkeiten der Gletscher-Klima-Rekonstruktion am Beispiel des Hintereisferners, Ötztaler Alpen, *Salzburger Geographische Arbeiten*, 36, 115–125.
- Schlüchter, C. (1976), Die lithostratigraphische Gliederung der letzteiszeitlichen Ablagerungen zwischen Bern und dem Thunersee, in *Beitrag zur Exkursionstagung des IGCP - Projektes 73/1/24. Quaternary glaciations in the northern hemisphere*.
- Schlüchter, C. (1977), Grundmoräne versus Schlammoräne - two types of lodgement till in the Alpine Foreland of Switzerland, *Boreas*, 6, 181–188.
- Schlüchter, C. (1978), Die stratigraphische Bedeutung von Verwitterungshorizonten im Quartär des Kantons Bern, *Eclogae Geologicae Helveticae*, 71, 227–232.
- Schlüchter, C. (1979a), Moraines and varves, in *Proceedings of an Inqua Symposium on genesis and lithology of quaternary deposits. Zurich. September 1978*.
- Schlüchter, C. (1979b), Über Talabschnitte im Berner Mittelland zwischen Alpen und Jura (Schweiz), *Eiszeitalter und Gegenwart*, 29, 101–113.
- Schlüchter, C. (1988a), Exkursion vom 11. Oktober 1987 der Schweizerischen Geologischen Gesellschaft im Rahmen der SNG-Jahrestagung in Luzern: Ein eiszeitgeologischer Überblick von Luzern zum Rhein - unter besonderer Berücksichtigung der Deckenschotter, *Eclogae Geologicae Helveticae*, 81(1), 249–258.
- Schlüchter, C. (1988b), Neue geologische Beobachtungen bei der Mammutfundstelle in Niederweningen (Kt. Zürich), *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 133(2), 99–108.
- Schlüchter, C. (1991), *Klimageschichtliche Probleme der letzten 130000 Jahre*, chap. Fazies und Chronologie des letzteiszeitlichen Eisaufbaus im Alpenvorland der Schweiz, pp. 401–408, G. Fischer Verlag.
- Schlüchter, C., and M. Welten (1973), Die Gliederung der letzteiszeitlichen Ablagerungen im Aaretal südlich von Bern (Schweiz), *Zeitschrift für Gletscherkunde und Glazialgeologie*, 9, 123–141.
- Schmeits, M., and J. Oerlemans (1997), Simulation of the historical variations in length of Unterer Grindelwaldgletscher, Switzerland, *Journal of Glaciology*, 43(143), 152–164.

- Schneeberger, C., H. Blatter, A. Abe-Ouchi, and M. Wild (2003), Modelling changes in the mass balance of glaciers of the northern hemisphere for a transient 2 x CO₂ scenario, *Journal of Hydrology*, 282, 145–163.
- Schneider, A. (1973), Flussumlegung im Prättigau (Kanton Graubünden), seismisch untersucht, *Geographica Helvetica*, 28(2), 118–120.
- Schneider, A. (1986), Contribution à l'étude du dernier interglaciaire: Resultats palynologiques à la grotte de Sclayn (Belgique), *Revue de Paléobiologie*, 5(1), 57–70.
- Schneider, T., H. Hampel, P. V. Mosquera, W. Tylmann, and M. Grosjean (2018), Paleo-enso revisited: Ecuadorian lake pallecocha does not reveal a conclusive el niño signal, *Global and Planetary Change*, (168), 54–66.
- Schommer, P. (1978), Rechnerische Nachbildung von Wasserspiegelganglinien im Firn und Vergleich mit Feldmessungen im Ewigschneefeld (Schweizer Alpen), *Zeitschrift für Gletscherkunde und Glazialgeologie*, 14(2), 173–190.
- Schöner, W., and R. Böhm (2007), A statistical mass balance model for reconstruction of LIA ice mass of glaciers of European Alps, *Annals of Glaciology*, 46, 161–169, doi:10.3189/172756407782871639.
- Schöner, W., I. Auer, and R. Böhm (2000a), Climate variability and glacier reaction in the Austrian eastern Alps, *Annals of Glaciology*, 31, 31–38.
- Schöner, W., I. Auer, and R. Böhm (2000b), Klimaänderung und Gletscherverhalten in den Hohen Tauern, *Salzburger Geographische Arbeiten*, 36, 97–113.
- Schotterer, U., R. Finkel, H. Oeschger, U. Siegenthaler, M. Wahlen, G. Bart, H. Gäggeler, and H. R. Von Gunten (1977), Isotope measurements on firn and ice cores from alpine glaciers, in *Isotopes and impurities in snow and ice - Symposium Grenoble 1975*.
- Schram, K. (1966), Untersuchung der vertikalen Komponente der Gletscherbewegung und der Deformation des Eises im Zungengebiet des Hintereisferners, *Berichte des naturwissenschaftlichen-medizinischen Vereins Innsbruck*, 54, 75–150.
- Schriber, G., B. Stauffer, and F. Müller (1977), 18O/16O, 2H/1H and 3H measurements on precipitation and air moisture samples from the North Water area, in *Isotopes and Impurities in Snow and Ice - Symposium. Grenoble*, 118, pp. 182–187.
- Schubert, C. (1979), *El Medio Ambiente Páramo*, chap. La zona del paramo: Morfología glacial y periglacial de los Andes de Venezuela, pp. 11–27, Ediciones Centro de Estudios Avanzados.
- Schubert, C. (1983), The Pleistocene and recent extent of the glaciers of the Sierra Nevada de Merida, Venezuela, in *Natural Environments and Man in Tropical Mountain Systems*.
- Schudel, P., C. Leibundgut, F. Kern, H. Schmidt, and J. Trösch (1995), Nitratbelastung im Grundwasser, *gwa*, 5, 363–371.
- Schüepp, M., and G. Gensler (1986), Witterungsänderungen in der Schweiz im 19. und 20. Jahrhundert. Ursachen und Folgen, *Geographica Helvetica*, 1, 17–26.
- Schuhwerk, F. (1992), Die Berücksichtigung der Ökologie in der Lichenometrie: Datierung mit Sukzessionsstadien von Flechtengesellschaften, *Stuttgarter Geographische Studien*, 117, 161–175.

- Schwalbe, B. (1886), *Über Eishöhlen und Eislöcher, nebst einigen Bemerkungen über Ventarolen und niedrige Bohrtemperaturen*, R. Gaertners Verlagbuchhandlung.
- Schwitzer, M. P., and C. F. Raymond (1993), Changes in the longitudinal profiles of glaciers during advance and retreat, *Journal of Glaciology*, 39(133), 582–590.
- Seibert, L. M. (1969), Topographic Maps of Glaciated Areas. A Cartographer's Reply to W.E.S. Henschel, *Canadian Cartographer*, 6, 131–132.
- Seifert, C., and L. King (1989), Die Windstruktur in hessischen Mittelgebirgen - eine meteorologische nutzungsbezogene Analyse, *Die Erde*, 120, 21–33.
- Seiler, W. (1980), Die Erzeugung von monatlichen Niederschlagsreihen mittels Monte-Carlo-Technik und die Vorhersage wahrscheinlicher Erosionsereignisse im Oberlauf der Ergolz (Tafeljura, südöstlich Basel), *Meteorologische Rundschau*, 33, 138–148.
- Seiler, W. (1981), Vergleich des Abflussverhaltens und der Erosionserscheinungen in zwei kleinen Einzugsgebieten während einer Schneeschmelze mit zusätzlichem Niederschlag bei geforenem Untergrund und einem spätwinterlichen Dauerregen (Oberlauf der Ergolz, südöstlich Basel), *Mitteilungen der Deutschen Bodenkundlichen Gesellschaft*, 30, 229–246.
- Seligman, G. (1941), The structure of a temperate glacier, *Geogr. Journal*, 97, 295–318.
- Semmel, A., and G. Stäblein (1971), Zur Entwicklung quartärer Hohlformen in Franken, *Eiszeitalter und Gegenwart*, 22, 23–34.
- Seppälä, M. (1972), Glacier cave observations on Llewellyn Glacier, British Columbia, *Acta Geographica*, 27, 5–15.
- Seppälä, M. (1973), On the formation of small marginal lakes on the Juneau Icefield, South-Eastern Alaska, U.S.A., *Journal of Glaciology*, 12(65), 267–273.
- Sevruk, B. (1974), Methodische Untersuchungen über die Höhenabhängigkeit der Regenmenge im Gebirge, in *Verhandlungen der 13.en Internationale Tagung für Alpine Meteorologie Saint - Vincent, 17.-19. Sept. 1974*.
- Sharp, R. P. (1956), Glaciers in the Arctic, *Arctic. Journal of the Arctic Institute of North America*, 9(1/2), 78–117.
- Shea, J. M., and S. J. Marshall (2007), Atmospheric flow indices, regional climate, and glacier mass balance in the Canadian Rocky Mountains, *International Journal of Climatology*, 27, 233–247.
- Shea, J. M., S. J. Marshall, and J. M. Livingston (2004), Glacier distribution and climate in the Canadian Rockies, *Arctic, Antarctic and Alpine Research*, 36(2), 272–279.
- Shrestha, M. L., Y. Fujii, and M. Nakawo (1976), Climate in Hidden Valley, Mukut Himal during the monsoon in 1974, *Seppyo*, 38, 105–108.
- Shreve, R. L. (1985), Esker characteristics interms of glacier physics, Katahdin esker system, Maine, *Geological Society of America Bulletin*, 96, 639–646.
- Siegenthaler, U., U. Schotterer, H. Oeschger, and B. Messerli (1972), Tritiummessungen an Wasserproben aus der Tibesti-Region, *Hochgebirgsforschung*, 2, 153–160.
- Simon, L., and L. Ommanney (1971), Glacier Surveys by District Personnel of the Water Survey of Canada. 1. Victoria Glacier, *Glacier Inventory of the Inland Waters Branch Departement of the Environmental, Ottawa, Canada, Note No. 6*.

- Simon, L., and L. Ommanney (1972), Glacier Surveys by District Personnel of the Water Survey of Canada. 2. Peyto Glacier, *Glacier Inventory of the Inland Waters Branch Department of the Environment, Ottawa, Canada, Note No. 7*.
- Skvarca, P., M. Stuefer, and H. Rott (1999), Temporal changes of Glaciar Mayo and Laguna Escondida, southern Patagonia, detected by remote sensing data, *Global and Planetary Change*, *22*, 245–253.
- Slupetzky, H. (1971), Der Verlauf der Ausaperung am Stubacher Sonnblickkees (Hohe Tauern) Ergebnisse der Kartierung der temporären Schneegrenze, *Mitteilungen der Österreichischen Geographischen Gesellschaft*, *113*(1-2), 1–24.
- Slupetzky, H. (1979), Die Massenbilanz des Filleckkeeses (Hohe Tauern) von 1964 bis 1978. Ein Beitrag zur Charakterisierung des Massenbilanz - und Umsatzverhaltens von sehr kleinen Gletschern, *Mitteilungen der Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie an der ETH Zürich*, *41*, 281–299.
- Slupetzky, H. (2015), Die Massenbilanzreihe vom Stubacher Sonnblickkees 1946 bis 2014 und die semidirekte Berechnung des Massenhaushalts von Gletschern, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *47/48*(2013/14), 167–200.
- Slupetzky, H., and N. Slupetzky (1995), Betref des Wachstums der Kletscher und Kälterwerdung des Klimas. Die Kreisamts-Präsidialsakte Nr. 84-89 von 1820 im Salzburger Landesarchiv, *Salzburger Geographische Materialien*, *23*, 3–43.
- Slupetzky, H., W. Slupetzky, and E. Kopecky (1971), Neue Gletscherkarte vom Stubacher Sonnblickkees (Hohe Tauern), *Zeitschrift für Gletscherkunde und Glazialgeologie*, *7*(1-2), 153–166.
- Smiraglia, C. (1985), I ghiacciai della Valmalenco, in *Valmalenco - Natura 1*, pp. 205–222.
- Smiraglia, C. (1987), Le forme crionivali del Lago della Catena Rossa (Gruppo del Monte Cevedale, Alta Valle di Peio), *Studi Trentini di Scienze Naturali*, *64*, 57–64.
- Smiraglia, C. (1988), I fori criocoonitici del Ghiacciaio dei Forni (Alta Valtellina). Aspetti morfometrici e sedimentologici, *Rivista Geografica Italiana*, *95*, 545–558.
- Smith, J. (1960), Glacier problems in South Georgia, *Journal of Glaciology*, *3*(28), 707–714.
- Sold, L., M. Huss, M. Hoelzle, H. Anderegg, P. C. Joerg, and M. Zemp (2013), Methodological approach to infer end-of-winter snow distribution on alpine glaciers, *Journal of Glaciology*, *59*(218), 1047–1059.
- Sollid, J. L., B. Etzelmüller, G. Vatne, and R. S. Ødegård (1994), Glacial dynamics, material transfer and sedimentation of Erikbreen and Hannabreen, Liefdefjorden, northern Spitsbergen, *Zeitschrift Geomorphologie N.F.*, *97*, 123–144.
- Sollid, J. L., P. H. Bø, B. Etzelmüller, G. Vatne, and R. S. Ødegård (s. a.), Glacial and glaciofluvial material transport in subpolar glaciers; examples from Svalbard.
- Solomina, O., W. Haeberli, C. Kull, and G. Wiles (2008), Historical and holocene glacier-climate variations: general concepts and overview, *Global and Planetary Change*, *60*, 1–9, doi:<http://dx.doi.org/10.1016/j.gloplacha.2007.02.001>.

- Sorg, A., T. Bolch, M. Stoffel, O. Solomina, and M. Beniston (2012), Climate change impacts on glaciers and runoff in Tien Shan (Central Asia), *Nature Climate Change*, *2*, 725–731, doi: 10.1038/nclimate1592.
- Souchez, R. (1967), The formation of shear moraines: an example from South Victoria Land, Antarctica), *Journal of Glaciology*, *6*(48), 837–843.
- Souchez, R. (1971), Ice-cored moraines in South-Western Ellesmere Island, N.W.T., Canada, *Journal of Glaciology*, *10*(59), 245–254.
- Souchez, R., and J. M. De Groote (1985), δD - $\delta^{18}O$ relationships in ice formed by subglacial freezing: Paleoclimatic implications, *Journal of Glaciology*, *31*(109), 229–232.
- Souchez, R., and J. Jouzel (1984), On the isotopic composition in δD and $\delta^{18}O$ of water and ice during freezing, *Journal of Glaciology*, *30*(106), 369–372.
- Souchez, R., and M. Lemmens (1985), Subglacial carbonate deposition: An isotopic study of a present-day case, *Paleogeography, Paleoclimatology, Paleoecology*, *51*, 357–364.
- Souchez, R., and R. Lorrain (1975), Chemical sorting effect at the base of an alpine glacier, *Journal of Glaciology*, *14*(71), 261–265.
- Souchez, R., and R. Lorrain (1987), *Glacio-fluvial Sediment Transfer*, chap. The subglacial sediment system, pp. 147–164, John Wiley & Sons Ltd.
- Souchez, R., and R. D. Lorrain (1978), Origin of the basal ice layer from alpine glaciers indicated by its chemistry, *Journal of Glaciology*, *20*(83), 319–328.
- Souchez, R., and J. Tison (1981), Basal freezing of squeezed water: Its influence on glacier erosion, *Annals of Glaciology*, *2*, 63–66.
- Souchez, R., and J. Tison (1987), Freezing rate determination by the isotopic composition of the ice: Implications in Antarctic studies, in *Proceedings of the Belgian National Colloquium on Antarctic Research. Brussels, October 20, 1987*.
- Souchez, R., R. D. Lorrain, and M. M. Lemmens (1973), Refreezing of interstitial water in a subglacial cavity of an alpine glacier as indicated by the chemical composition of ice, *Journal of Glaciology*, *12*(66), 453–459.
- Souchez, R., M. Lemmens, R. Lorrain, and J. Tison (1978), Pressure-melting within a glacier indicated by the chemistry of re-gelation ice, *Nature*, *273*(5662), 454–456.
- Souchez, R., J. Tison, and J. Jouzel (1987), Freezing rate determination by the isotopic composition of the ice, *Geophysical Research Letters*, *14*(6), 599–602.
- Souchez, R., J. Tison, and J. Jouzel (1988), Deuterium concentration and growth rate of Antarctic first-year sea ice, *Geophysical Research Letters*, *15*(12), 1385–1388.
- Stäblein, G. (1969), Die pleistozäne Vereisung und ihre isostatischen Auswirkungen im Bereich des Bellsunds (West-Spitzbergen), *Eiszeitalter und Gegenwart*, *20*, 123–130.
- Stäblein, G. (1970), Untersuchung der Auftauschicht über Dauerfrost in Spitzbergen, *Eiszeitalter und Gegenwart*, *21*, 47–57.
- Stäblein, G. (1971), Der polare Permafrost und die Auftauschicht in Svalbard, *Polarforschung*, *7*, 110–120.

- Stäblein, G. (1972), Zur Frage geomorphologischer Spuren arider Klimaphasen im Oberrheingebiet, *Geomorphologie. N. F.*, 15, 66–68.
- Stäblein, G. (1975), Eisrandlagen und Küstenentwicklung in West-Grönland, *Polarforschung*, 45(2), 70–87.
- Stäblein, G. (1977a), Permafrost im periglazialen Westgrönland, *Erdkunde*, 31, 272–279.
- Stäblein, G. (1977b), Periglaziale Formengesellschaften und rezente Formungsbedingungen in Grönland, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, 31, 18–35.
- Stäblein, G. (1977c), Rezente Morphodynamik und Vorzeitrelieffluenz bei der Hang- und Talentwicklung in Westgrönland, *Geomorphologie. N. F.*, 28, 181–199.
- Stäblein, G. (1977d), Periglaziale Höhenstufen zwischen Subarktis und Äquator, *Die Erde*, 108, 151–154.
- Stäblein, G. (1977), Arktische Böden West-Grönlands: Pedovarianz in Abhängigkeit vom geoökologischen Milieu, *Polarforschung*, 47(1/2), 11–25.
- Stäblein, G. (1978), Traditionen und aktuelle Aufgaben der Polarforschung, *Die Erde*, 109, 229–267.
- Stäblein, G. (1979), *Kanada. Naturraum und Entwicklungspotenzial*, vol. 79, chap. Verbreitung und Probleme des Permafrostes im nördlichen Kanada, pp. 27–43, Geographisches Institut der Universität Marburg.
- Stäblein, G. (1980), Studies in the periglacial environment: A review of geomorphodynamic, cryopedological and Quaternary research in Germany, *Geomorphologie. N. F.*, 36, 84–95.
- Stauffer, B. (1985), Untersuchungen an Eisbohrkernen von Alpengletschern, *Geographica Helvetica*, 4, 223–229.
- Steck, A. (1983), Geologie der Aletschregion (VS), *Bulletin Murithienne*, 101, 135–154.
- Steiner, D., A. Walter, and H. J. Zumbühl (2005), The application of a nonlinear backpropagation neural network to study the mass balance of the Great Aletsch Glacier, *Journal of Glaciology*, 51(173), 313–323.
- Steiner, D., A. Pauling, S. U. Nussbaumer, A. Nesje, J. Luterbacher, H. Wanner, and H. J. Zumbühl (2008), Sensitivity of European glaciers to precipitation and temperature - two case studies, *Climatic Change*, 90, 413–441.
- Steinert, H. (1988), Zweifel am Klimakollaps, *Die Zeit*, 43, 96–98.
- Steinmann, G. (1899), Ueber glaziale StauchungserseStauchung (sogen. Taschen) am Bieler See, *Neues Jahrbuch für Mineralogie, Geologie und Palaeontologie*, 1, 216–230.
- Stingl, H. (1974), Zur Genese und Entwicklung von Strukturbodenformen, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, 29, 249–262.
- Stingl, H., and K. Garleff (1978), Gletscherschwankungen in den subtropisch-semiariden Hochanden Argentiniens, *Geomorphologie. N. F.*, 30, 115–131.
- Stingl, H., and K. Garleff (1983), Beobachtungen zur Hang- und Wandentwicklung in der Periglazialstufe der subtropisch-semiariden Hochanden Argentiniens, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, 35, 199–213.

- Stingl, H., and K. Garleff (1984a), Spätglaziale und holozäne Gletscher- und Klimaschwankungen in den argentinischen Anden, *Zbl. Geol. Paläont. Teil 1*, 11/12, 1667–1677.
- Stingl, H., and K. Garleff (1984b), Tertiäre und pleistozäne Reliefentwicklung an der interozeanischen Wasserscheide in Südpatagonien (Gebiet von Rio Turbio, Argentinien), *Berliner Geographische Abhandlungen*, 36, 113–118.
- Stingl, H., and K. Garleff (1985), Glacier variations and climate of the late quaternary in the subtropical and mid-latitude Andes of Argentina, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 21, 225–228.
- Stingl, H., and R. Herrmann (1976), Untersuchungen zum Strukturbodenproblem auf Island Geländebeobachtungen und statistische Auswertung, *Geomorphologie. N. F.*, 20(2), 205–226.
- Stingl, H., K. Garleff, and E. Brunotte (1983), Pedimenttypen im westlichen Argentinien, *Geomorphologie. N. F.*, 48, 213–224.
- Storad, C. J. (1990), Forever frozen, in *ASU Research Fall 1990*.
- Streiff-Becker, R. (1939), Glarner Gletscherstudien, *Mitteilungen der Naturforschenden Gesellschaft des Kantons Glarus*, 6, 1–31.
- Streiff-Becker, R. (1949), Der Glärnisch-Gletscher, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 94, 109–122.
- Strunk, H. (1987), Strukturbedingtes Mikrorelief am Fako (Mt. Cameroon) und Konvergenzformen: Ein genetischer Vergleich, *Geomorphologie. N. F.*, 66, 1–14.
- Strunk, H. (1989a), Dendrogeomorphology of debris flows, *Dendrochronologia*, 7, 15–25.
- Strunk, H. (1989b), Dendrochronological investigations on the frequency of debris flows in the Italian Alps, *Geografia Fisica e Dinamica Quaternaria*, 2, 13–17.
- Sugiyama, S., A. Bauder, C. Zahno, and M. Funk (2007), Evolution of Rhonegletscher, Switzerland, over the past 125 years and in the future: application of an improved flowline model, *Annals of Glaciology*, 46, 268–274.
- Susstrunk, A. (1951), Sondage du glacier par la méthode sismique, *La Houille Blanche*, A, 309–317.
- Suter, S., and M. Hoelzle (2004), Kalte Gletscher als Paläotemperaturarchiv - Untersuchungen aus dem Monte-Rosa-Gebiet, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*, 149(4), 95–104.
- Suter, S., M. Hoelzle, and A. Ohmura (2004), Energy balance at a cold alpine firn saddle, Seserjoch, Monte Rosa, *International Journal of Climatology*, 24, 1423–1442.
- Sverrisson, M., A. Jóhannesson, and H. Björnsson (1980), Instruments and Methods. Radio-echo equipment for depth sounding of temperate glaciers, *Journal of Glaciology*, 25(93), 477–486.
- Swithinbank, C. (1983), Towards an inventory of the Great Ice Sheets, *Geografiska Annaler*, 65, 289–294.
- Swithinbank, C., and C. Lane (1977), *Remote sensing of the terrestrial environment*, chap. Antarctic mapping from satellite imagery, pp. 212–221, Butterworths.

- Taranquillini, W. (1974), Der Einfluss von Seehöhe und Länge der Vegetationszeit auf das cuticuläre Transpirationsvermögen von Fichtensämlingen, *Berichte der Deutschen Botanischen Gesellschaft*, 87, 175–184.
- Tarr, R. S., and L. Martin (1906), Glaciers and glaciation of Yakutat Bay, Alaska, *Bulletin of the American Geographical Society*, 38, 1–23.
- Tarr, R. S., and L. Martin (1907), Position of Hubbard glacier front, *Bulletin of the American Geographical Society*, 39, 1–8.
- Tetreau, M. D. (1990), Exit glacier terminus monitoring; Exit glacier, Kenai Fjords National Park.
- Theakstone, W. H. (1965), Subglacial observations at Østerdalsisen, Svartisen, *Saertrykk av norsk geografisk tidsskrift*, 20, 38–43.
- Theakstone, W. H. (1966), Deformed ice at the bottom of Østerdalsisen, Norway, *Journal of Glaciology*, 6(43), 19–21.
- Theakstone, W. H. (1967), Basal sliding and movement near the margin of the Glacier Østerdalsisen, Norway, *Journal of Glaciology*, 6(48), 805–816.
- Theakstone, W. H. (1976), Glacial lake sedimentation, Austerdalsisen, Norway, *Sedimentology*, 23, 671–688.
- Theakstone, W. H. (1979), Observations within cavities at the bed of the glacier Østerdalsisen, Norway, *Journal of Glaciology*, 23(89), 273–281.
- Thiel, E. C. (1962), The amount of ice on planet earth, *Antarctic Research, Geophysical Monograph*, 7, 172–175.
- Thompson, L. G., and S. Hastenrath (1981), Climatic ice core studies at Lewis Glacier, Mount Kenya, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 17(1), 115–123.
- Thompson, L. G., S. Hastenrath, and B. Morales Arnao (1979), Climatic ice core records from the tropical Quelccaya Ice Cap, *Science*, 203, 1240–1243.
- Thompson, L. G., E. Mosley-Thompson, M. E. Davis, P. Lin, K. Henderson, and T. Mashiota (2003), Tropical glacier and ice core evidence of climate change on annual to millennial time scales, *Climatic Change*, 59, 137–155.
- Thouret, J. (1990), Effect of the November 13, 1985 eruption on the snow pack and ice cap of Nevado del Ruiz volcano, Colombia, *Journal of Volcanology and Geothermal Research*, 41, 177–201.
- Thyssen, F., and M. Ahmad (1969), Ergebnisse seismischer Messungen auf dem Aletschgletscher, *Polarforschung*, 39(1), 283–294.
- Thyssen, F., H. Kohlen, M. V. Cowan, and G. W. Timco (1974), DC resistivity measurements on the sea ice near Pond Inlet, N.W.T. (Baffin Island), *Polarforschung*, 44, 117–126.
- Thyssen, F., H. Eisner, N. Blindow, and W. Ambach (1980), Kartierung von wassergesättigten Firnschichten auf dem Kesselwandferner mit dem EMR-Verfahren, *Polarforschung*, 50(1/2), 9–16.
- Tison, J. (1986), Observation d'un mécanisme particulier de formation des couches de gglace babasal en Valais; Implications sur la cristallographie de la glace, in *Société Hydrotechnique de France. Séction de Glaciologie*.

- Toutin, T. (2008), ASTER DEMs for geomatic and geoscientific applications: a review, *International Journal of Remote Sensing*, 29(7), 1855–1875.
- Trabant, D. C., W. D. Harrison, and C. Benson (1973), Thermal regime of McCall Glacier, Brooks Range, Northern Alaska, in *Climate of the Arctic Twenty Fourth Alaska Science Conference, August 15-17, 1973*, pp. 347–349.
- Treydte, K. S., G. H. Schleser, G. Helle, D. C. Frank, M. Winiger, G. H. Haug, and J. Esper (2006), The twentieth century was the wettest period in northern Pakistan over the past millennium, *Nature*, 440, 1179–1182.
- Tsuchiya, I. (1984), A very small glacier on Mt. Chokai, Japan, 1972-1981, *Geographical Review of Japan*, 57, 142–153.
- Turpin, O. C., R. I. Ferguson, and C. D. Clark (1997), Remote sensing of snowline rise as an aid to test and calibrating a glacier runoff model, *Phys. Chem. Earth*, 22(3-4), 279–283.
- Tyrtikov, A. P. (1965), Vegetation as indicator of composition and properties of seasonally frozen, active layer and permanently frozen ground, Igarka District, *International Geology Review*, 7(2), 196–201.
- UNESCO (1970), Perennial ice and snow masses: A guide for compilation and assemblage of data for a world inventory.
- Urdea, P. (1988), Consideratii asupra ghetarilor de pietre din Muntii Retezat, *St. Cer. Geol. Geofiz. Geogr., Geografie*, 35, 85–90.
- Valentine, K. W. G., R. H. King, J. F. Dormaar, W. J. Vreeken, C. Tarnocai, C. R. De Kimpe, and S. A. Harris (1987), Some aspects of quaternary soils in Canada, *Canadian Journal of Soil Science*, 67(2), 221–247.
- Van der Meer, J. J. M. (1982), A recent drumlin with fluted surface in the Swiss Alps, in *INQUA Symposia of the Genesis and Lithology of Quaternary Deposits/ USA 1981 / Argentina 1982*, pp. 105–109.
- Van der Meer, J. J. M. (1987), Tills and glaciotectionics, in *Proceedings of an Inqua Symposium on Genesis and Lithology of Glacial Deposits. Amsterdam. 1986*.
- Van der Meer, J. J. M. (1988), Les Moraines de Pousee. Une étude comparative de ces formations en Holland, au Spitzberg et dans les Alpes, *Bulletin de la Société neuchâteloise de géographie*, 32, 159–171.
- Van der Meer, J. J. M., and G. S. Boulton (1986), Hernieuwede belangstelling voor onderzoek van stunwallen. Eerste resultaten van den glacitecs '84 expeditie naar Spitsbergen, *Geografisch tijdschrift*, 20(3), 236–244.
- Van der Meer, J. J. M., and M. Vis (1986), Achtergronden van een ramp: De uitbarsting van de Nevado del Ruiz (Colombia), November 1985, *Geografisch tijdschrift*, 20(3), 230–235.
- Van der Meer, J. J. M., M. Rappol, and J. Semeijn (1985), Sedimentology and genesis of glacial deposits in the Goudsberg, Central Netherlands, *medelingen rijks geologische dienst*, 39(2), 2–29.
- Van Dorsser, H. J., and A. I. Salomé (1973), Different methods of detailed geomorphological mapping (with coloured example), *K.N.A.G. Geografisch Tijdschrift*, 7, 71–74.

- Van Vliet Lanoe, B. (1985), From frost to gelifluction: A new approach based on micromorphology its applications to arctic environment, *INTER-NORD*, 17, 15–20.
- Van Vliet Lanoe, B. (1987), Interaction entre l'activité biologique et la glace de segregation en lentilles. Exemples en milieux arctiques et alpins, in *Proceedings of the VIIth International Working Meeting on Soil Micromorphology. July 1985*, 337-343.
- Vanni, M. (1949), Le variazioni dei ghiacciai in Italia nel 1947, *Consiglio Nazionale Ricerche*, 7, 113–118.
- Vanuzzo, C. (2001), The glacier retreat in Valle d'Aosta (Western Italian Alps) from the Little Ice Age to the second half of the 20th century: Linear, areal, volumetric and equilibrium line altitude changes, *Geografia Fisica e Dinamica Quaternaria*, 24, 99–113.
- Vergara, W., A. M. Deeb, A. M. Valencia, B. R. S., B. Francou, A. Zarzar, A. Grünwaldt, and S. M. Haeussling (2007), Economic impacts of rapid glacier retreat in the Andes, *EOS*, 88(25), 261–268.
- Vidal, H. (1979), Glaziale Übertiefung unter rezenten Gletschern und in deren Vorfeld, *Eiszeitalter und Gegenwart*, 29, 5–8.
- Vincent, C. (2002), Influence of climate change over the 20th century on four French glacier mass balances, *Journal of Geophysical Research*, 107, D19, 4375.
- Vincent, C., G. Kappenberger, F. Valla, A. Bauder, M. Funk, and E. Le Meur (2004), Ice ablation as evidence of climate change in the Alps over the 20th century, *Journal of Geophysical Research*, 109, D10,104.
- Vincent, C., E. Le Meur, D. Six, and M. Funk (2005), Solving the paradox of the end of the Little Ice Age in the Alps, *Geophysical Research Letters*, 32, 4 pp.
- Vincent, C., A. Soruco, D. Six, and E. Le Meur (2009), Glacier thickening and decay analysis from 50 years of glaciological observations performed on Glacier d'Argentière, Mont Blanc area, France, *Annals of Glaciology*, 50, 73–79.
- Vischer, D. (1981a), Verlandung von Stauseen, *Schweizer Ingenieur und Architekt*, 47, 6.
- Vischer, D. (1981b), Der Forscher zwischen Karikatur und Wirklichkeit, *Technische Rundschau*, 39, 3–8.
- Vischer, D. (1984), Energievernichter im Wasserbau, *Schweizer Ingenieur und Architekt*, 40, 1–8.
- Vischer, D. (1986), Elektrizität aus Wasserkraft, *Physik unserer Zeit*, 17(5), 132–141.
- Vischer, D. (1989), Ideen zur Bodenseeregulierung. Ziele, Altes und Neues, *Mensuration, Photogrammétrie, Génie rural*, 1, 32–37.
- Vischer, D. (1992), Wellennutzung vor dem Durchbruch?, *Schweizer Ingenieur und Architekt*, 9, 172–177.
- Vischer, D. (1993a), Versiegelung der Landschaft - grössere Hochwasser?, *gwa*, 4, 280–283.
- Vischer, D. (1993b), Die Trink- und Brauchwasserableitungen aus dem Bodensee ihr Einfluss auf den Seespiegel und den Hochrhein, *wasser, energie, luft - eau, énergie, air*, 85(3/4), 45–47.
- Vischer, D. (1995), Stauseen als Trinkwasserspeicher. Ein Merkmal ostdeutscher Wasserversorgungen, *Schweizer Ingenieur und Architekt*, 22, 12–16.

- Vischer, D., and H. Jensen (1982), Abflussprognosen am Beispiel des Rheins bei Rheinfelden, in *Mitteilung Nr. 3 der Landeshydrologie Bern: Beschaffung hydrologischer Unterlagen in der Schweiz, Fachtagung 1979 in Krattigen*, pp. 1–16.
- Vischer, D., and F. Naef (1985), Hochwasserschätzung zur Bemessung der Hochwasserentlastung von Talsperren, *wasser, energie, luft - eau, énergie, air*, 77(5/6), 110–115.
- Volkart, P. (1984), Sohlenbelüftung gegen Kavitationserosion in Schussrinnen, *Wasserwirtschaft*, 74(9), 1–5.
- von Albedyll, L., H. Machguth, S. U. Nussbaumer, and M. Zemp (2018), Elevation changes of the holm land ice cap, northeast greenland, from 1978 to 2012–2015, derived from high-resolution digital elevation models, *Arctic, Antarctic, and Alpine Research*, 50(1), e1523,638.
- Von Dechen, H. (s.a.), Ueber die Eisbildung in den Strömen. Eine Vorlesung, 119-128 pp.
- Von Helmholtz, H. (1903), *Eis und Gletscher*, 233-263 pp., Braunschweig, F. Vieweg und Sohn.
- Voskule, G. A. (s.a.), Untersuchung und vermessung des in der letzten rückzugsperiode verlassenem bodens des hüfi-gletschers.
- Wagenbach, D., U. Görlach, K. Haffa, H. G. Junghans, K. O. Münnich, and U. Schotterer (1983), A long-term aerosol deposition record in a high altitude alpine glacier, in *WMO Technical Conference on Observation and measurement of atmospheric contaminants (Tecomac) Vienna 17 to 21 October 1983*.
- Wagenbach, D., K. O. Münnich, U. Schotterer, and H. Oeschger (1988), The anthropogenic impact on snow chemistry at Colle Gnifetti, Swiss Alps, *Annals of Glaciology*, 10, 183–188.
- Wagenbach, D., P. Bohleber, and S. Preunkert (2012), Cold, alpine ice bodies revisited: What may we learn from their impurity and isotope content?, *Geografiska Annaler*, 94(2), 245–263, doi:10.1111/j.1468-0459.2012.00461.x.
- Wahnschaffe, F. (1904), Die glacialen Störungen in den Kreidegruben von Finkenwalde bei Stettin, in *Briefe der Monatsberichte Nr. 3 Jahrg. 1904 der Deutschen geologischen Gesellschaft*.
- Wahnschaffe, F. (1906), Über glaziale Schichtenstörungen im Diluvium und Tertiär bei Freienwalde A. O. und Fürstenwalde A. D. Spree, in *Monatsberichte der Deutschen Geologischen Gesellschaft*, p. 13.
- Walder, J. S. (1982), Stability of sheet flow of water beneath temperate glaciers and implications for glacier surging, *Journal of Glaciology*, 28(99), 273–293.
- Walder, J. S., and B. Hallet (1979), Geometry of former subglacial water channels and cavities, *Journal of Glaciology*, 23(89), 335–346.
- Wallén, C. C. (1981), Monitoring the world's glaciers - the present situation, *Geografiska Annaler*, 63, 197–200.
- Warren, S. G. (1980), A model for the spectral albedo of snow. II: Snow containing atmospheric aerosols, *Journal of the Atmospheric Sciences*, 37(12), 2734–2745.
- Warren, S. G. (1982a), Ice and climate mmodelli: An editorial essay, *Climatic Change*, 4, 329–340.
- Warren, S. G. (1982b), Optical properties of snow, *Reviews of Geophysics and Space Physics*, 20(1), 67–89.

- Warren, S. G. (1984), Impurities in snow: Effects on albedo and snowmelt, *Annals of Glaciology*, 5, 177–179.
- Washburn, A. L. (1983), What is a palsa?, *Abhandlungen der Akademie der Wissenschaften in Göttingen*, 35, 34–47.
- Washburn, A. L. (1984), Robert Foster Black. 1918–1983. In Memoriam, *Arctic and Alpine Research*, 16(2), 265–269.
- Washburn, A. L., and G. Weller (1986), Arctic research in the national interest, *Science*, 223, 633–639.
- Watson, E., and B. H. Luckman (2004), Tree-ring-based mass-balance estimates for the past 300 years at Peyto Glacier, Alberta, Canada, *Quaternary Research*, 62(1), 9–18.
- Watson, R. T., and W. Haeberli (2004), Environmental threats, mitigation strategies and high-mountain areas, *Tech. rep.*, Royal Swedish Academy of Sciences.
- Wayne, W. J. (1984), *Quaternary Dating Methods*, chap. The quaternary succession in the Rio Blanco Basin, Cordón del Plata, Mendoza Province, Argentina: An application of multiple relative-dating techniques, pp. 389–406, Elsevier Science Publishers B. V.
- Weber, E., L. Braun, W. Mauser, and M. Prasch (2010), Contribution of rain, snow- and icemelt in the upper Danube. Discharge today and in the future, *Geografia Fisica e Dinamica Quaternaria*, 3, 221–230.
- Weber, S. L., and J. Oerlemans (2003), Holocene glacier variability: three case studies using an intermediate-complexity climate model, *The Holocene*, 13(3), 353–363.
- Weidick, A. (1975), *Grønlands geologiske undersøgelse rapport Nr. 68*, chap. Estimates on the mass balance changes of the Inland Ice since Wisconsin-Weichsel, p. 21, The Geological Survey of Greenland.
- Weidick, A. (1988), Surging glaciers in Greenland - a status, *Rapp. Grønlands geol. Unders.*, 140, 106–110.
- Weidick, A., and O. B. Olesen (1980), *Grønlands geologiske undersøgelse rapport Nr. 94*, chap. Hydrological basins in West Greenland, p. 51, The Geological Survey of Greenland.
- Weidick, A., and H. H. Thomsen (1986), A decade of glacier investigations for utilisation of Greenland hydropower, *Rapp. Grønlands geol. Unders.*, 128, 157–169.
- Weinmeister, H. W. (1988), Ökonomie und Ökologie am Beispiel des Schutzwasserbaues (landschaftsökologische und volkswirtschaftliche Grenzen des technischen Schutzwasserbaues), *Internationales Symposium INTERPRAEVENT 1988 - Graz*, 4, 339–376.
- Weinmeister, H. W. (1990), Wildbachverbauung aus landschaftsökologischer Sicht, *Österreichische Forstzeitung*, 11, 18–20.
- Wen-Ying, W., and C. Jian-ming (1980), Terrestrial stereophotogrammetric surveying and mapping in the region of Mount Qomolangma and the Batura Glacier in Karakorum, *Journal of Glaciology and Geocryology*, 2(4), 22–28.
- Werle, O. (1987), Hochgebirge. Ergebnisse neuer Forschungen, *Frankfurter Beiträge zur Didaktik der Geographie*, 10, 15–40.

- Werner, D., and W. Kley (1977), Problems of heat storage in aquifers, *Journal of Hydrology*, 34, 35–43.
- Whalley, W. B. (1976a), Some aspects of the structure and development of earth pillars and corrugated lateral moraine surfaces, *Studia Geomorphologica Carpatho-Balcanica*, 10, 49–62.
- Whalley, W. B. (1976b), A rock glacier and its relation to the mass balance of corrie glaciers, Strupbreen, Troms, Norway, *Norsk Geografisk Tidsskrift*, 30(2), 51–55.
- White, S. E. (1971), Rock glacier studies in the Colorado front range, 1961 to 1968, *Arctic and Alpine Research*, 3(1), 43–64.
- White, S. E. (1972), Alpine subnival boulder pavements in Colorado Front Range, *Geological Society of America Bulletin*, 83, 195–200.
- White, S. E. (1976a), Rock glaciers and block fields, review and new data, *Quaternary Research*, 6, 77–97.
- White, S. E. (1976b), Is frost action really only hydration shattering? A review, *Arctic and Alpine Research*, 8(1), 1–6.
- White, S. E. (1981a), Equilibrium line altitudes of late pleistocene and recent glaciers in Central Mexico, *Geografiska Annaler*, 63(3-4), 241–249.
- White, S. E. (1981b), Neoglacial to recent glacier fluctuations on the Volcano Popocatepetl, Mexico, *Journal of Glaciology*, 27(96), 359–363.
- White, S. E. (1982), Physical and geological nature of the Indian Peaks, Colorado Front Range, in *Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr*.
- White, S. E., and S. Valastro (1984), Pleistocene glaciation of Volcano Ajusco, Central Mexico, and comparison with the standard mexican glacial sequence, *Quaternary Research*, 21, 21–35.
- Wick, P. (1973), Fossiles Rieseneiskeilsystem in spätglazialen Schottern im vorderen Prättigau (Graubünden/Schweiz), *Geomorphologie. N. F.*, 16, 15–24.
- Wien, K. (1935), Die Gletschergebiete der Pamire und Westturkestan, *Zeitschrift für Gletscherkunde und Glazialgeologie*, 23, 36–56 (Separatum).
- Williams, F. M., and K. Hutter (1983), Thermal response of unconfined ice shelves to climatic conditions, *Acta Mechanica*, 47, 131–146.
- Williams, G. P. (1968), Freeze-up and break-up of fresh water lakes, in *Proceedings of a conference on ice pressures against structures held at Laval University, Quebec City, November 1966*, pp. 203–215.
- Williams, J. R., A. Boovarsson, S. Frioriksson, I. Thorsteinsson, G. Palmason, S. Rist, Saemundsson, K. S. H., and S. Thorarinsson (1974), Environmental studies of Iceland with ERTS-1 imagery.
- Williams, R. S. (1983), Glaciers: Clues to future climate?
- Williams, R. S. (1987), Satellite remote sensing of Vatnajökull, Iceland, *Annals of Glaciology*, 9, 127–136.
- Williams, R. S., and J. G. Moore (1976), Man against volcano: The eruption of Heimaey, Vestmannaeyjar, Iceland.

- Williams, R. S., S. Pórarinnsson, and E. C. Morris (1983a), Geomorphic classification of icelandic volcanoes, *Jökull*, *33*, 19–24.
- Williams, R. S., T. K. Meunier, and J. G. Ferrigno (1983b), Blue ice, meteorites and satellite imagery in Antarctica, *Polar Record*, *21*(134), 493–504.
- Wilson, P. (1990), Morphology, sedimentological characteristics and origin of a fossil rock glacier on Muckish Mountain, Northwest Ireland, *Geografiska Annaler*, *72*, 237–247.
- Winiger, M., M. Gumpert, and H. Yamout (2005), Karakorum - Hindukush - western Himalaya: assessing high-altitude water resources, *Hydrological Processes*, *19*, 2329–2338.
- Winsvold, S. H., A. Kääb, and C. Nuth (2016), Regional glacier mapping using optical satellite data time series, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, *9*(8), 3698–3711, doi:10.1109/JSTARS.2016.2527063.
- Wintges, T., and H. Heuberger (1980a), Untersuchungen an Parabelrissen und Sichelbrüchen im Zemmgrund (Zillertal) und über die damit verbundene Abtragung, *Zeitschrift für Gletscherkunde und Glazialgeologie*, *16*(2), 157–170.
- Wintges, T., and H. Heuberger (1980b), Parabelrisse, Sichelbrüche und Sichelwannen im Vereinigungsbereich zweier Zillertaler Gletscher (Tirol), *Zeitschrift für Gletscherkunde und Glazialgeologie*, *16*(1), 11–23.
- Wiscombe, W. J., and S. G. Warren (1980), A model for the spectral albedo of snow. 1. Pure Snow, *Journal of the Atmospheric Sciences*, *37*(12), 2712–2733.
- Wislinski, A. (1985), Glacier in the vicinity of the Morskie Oko lake in the Tatra Mts, *Annales Universitatis Mariae Curie-Sklodowska Lublin - Polonia Sectio B*, *40*, 55–76.
- Wolfrath-Meyer, B. (1987), Lithostratigraphische, sedimentologische und chronologische Untersuchungen im Quartär des Schweizer Seelands (Kantone Bern und Fribourg), *Eclogae Geologicae Helveticae*, *80*, 207–222.
- Worsley, P. (2006), Jens Esmark, Vassryggen and early glacial theory in Britain, *Mercian Geologist*, *16*(3), 161–172.
- Würländer, R., and M. Kuhn (2000), Zur Erstellung und Anwendung der Produkte des neuen Österreichischen Gletscherkatasters, *Salzburger Geographische Arbeiten*, *36*, 57–67.
- Yafeng, S. (1980), Some achievement on mountain glacier researches in China, *Seppyo*, *42*(4), 215–228.
- Yafeng, S. (1983), Some idea on utilization of snow and ice resources in glaciated regions of northwest mountains, *Journal of Glaciology and Geocryology*, *5*(1), 85–87.
- Yamada, T., T. Shiraiwa, H. Iida, T. Kadota, T. Watanabe, B. Rana, Y. Ageta, and H. Fushimi (1992), Fluctuations of the glaciers from the 1970s to 1989 in the Khumbu, Shorong and Langtang regions, Nepal Himalayas, *Bulletin of Glacier Research*, *10*, 11–19.
- Zeller, J., and G. Röthlisberger (1988), Unwetterschäden in der Schweiz im Jahre 1987, *Wasser, Energie, Luft - eau, énergie, air*, *80*(1/2), 29–42.
- Zemp, M., A. Kääb, M. Hoelzle, and W. Haeberli (2005a), GIS-based modelling of glacial sediment balance, *Geomorphologie. N. F.*, *138*, 113–129.

- Zemp, M., R. Frauenfelder, W. Haeberli, and M. Hoelzle (2005b), World-wide glacier mass balance measurements: general trends and first results of the extraordinary year 2003 in Central Europe, *Data of glaciological studies*, 99, 3–12.
- Zemp, M., W. Haeberli, M. Hoelzle, and F. Paul (2006), Alpine glaciers to disappear within decades?, *Geophysical Research Letters*, 33, 4 pp.
- Zemp, M., M. Hoelzle, and W. Haeberli (2007), Distributed modelling of the regional climatic equilibrium line altitude of glaciers in the European Alps, *Global and Planetary Change*, 56(1–2), 83–100, doi:10.1016/j.gloplacha.2006.07.002.
- Zemp, M., F. Paul, M. Hoelzle, and W. Haeberli (2008), *Darkening Peaks: Glacier Retreat, Science and Society*, chap. Glacier fluctuations in the European Alps, 1850-2000. An overview and a spatiotemporal analysis of available data, pp. 152–167, University of California Press.
- Zemp, M., M. Hoelzle, and W. Haeberli (2009a), Six decades of glacier mass-balance observations: a review of the worldwide monitoring network, *Annals of Glaciology*, 50(50), 101–111, doi: 10.3189/172756409787769591.
- Zemp, M., M. Hoelzle, and W. Haeberli (2009b), Six decades of glacier mass-balance observations: a review of the worldwide monitoring network, *Annals of Glaciology*, 50, 101–111.
- Zhijiu, C. (1985), Discovery of Kunlunshan-type rock glaciers and the classification of rock glaciers, *Kexue Tongbao*, 30(3), 365–369.
- Zingg, T. (1952), Gletscherbewegungen der letzten 50 Jahre in Graubünden, *Wasser- und Energiewirtschaft*, 44, 132–135.
- Zollinger, F. (1982), Die Modellversuche zum Geschieberückhaltebecken Schächen, *Schweizer Ingenieur und Architekt*, 21, 7.
- Zumbühl, H. J., and B. Messerli (1980), *Das Klima*, chap. Gletscherschwankungen und Temperaturverlauf. Beispiel einer Korrelationsanalyse von indirekten und direkten Klimazeugen am Beispiel der Grindelwaldgletscher und der 210jährigen Basler Temperaturreihe, pp. 161–174, Springer Berlin Heidelberg.