

Peer-reviewed Publications in 2014

- Andrews, L. C., Catania, G. A., Hoffman, M. J., Gulley, J. D., Lüthi, M. P., , Ryser, C., Hawley, R. L., and Neumann, T. A. (2014). Direct observations of evolving subglacial drainage beneath the Greenland Ice Sheet. *Nature*, 514. doi:10.1038/nature13796.
- Farinotti, D., King, E., Albrecht, A., Huss, M., and Gudmundsson, G. (2014). The bedrock topography of Starbuck Glacier, Antarctic Peninsula, as determined by radio-echo soundings and flow modeling. *Annals of Glaciology*, 55(67):22–28.
- Gabbi, J., Carenzo, M., Pellicciotti, F., Bauder, A., and Funk, M. (2014). A comparison of empirical and physically-based glacier surface melt models for long-term simulations of glacier response. *Journal of Glaciology*, 60(224):1140–1154.
- Gaertner-Roer, I., Naegeli, K., Huss, M., Knecht, T., Machguth, H., and Zemp, M. (2014). A database of worldwide glacier thickness observations. *Global and Planetary Change*, 22:330–344.
- Gladstone, R., Schäfer, M., Zwinger, T., Gong, Y., Strozzi, T., Mottram, R., Boberg, F., and Moore, J. (2014). Importance of basal processes in simulations of a surging Svalbard outlet glacier. *The Cryosphere*, 8:1393–1405.
- Heeszel, D., Walter, F., and Kilb, D. (2014). Humming glaciers. *Geology*, 42(12):1099–1102. doi:10.1130/G35994.1.
- Huss, M. and Farinotti, D. (2014). A high-resolution bedrock map for the Antarctic Peninsula. *The Cryosphere*, 8:1261–1273.
- Jouvet, G. and Funk, M. (2014). Modelling the trajectory of the corpses of mountaineers who disappeared in 1926 on Aletschgletscher. *Journal of Glaciology*, 60(220):255–261.
- Keller, A. and Hutter, K. (2014a). Conceptual thoughts on continuum damage mechanics for shallow ice shelves. *Journal of Glaciology*, 60(222):685–693.
- Keller, A. and Hutter, K. (2014b). A viscoelastic damage model for polycrystalline ice, inspired by Weibull-distributed fiber bundle models. Part I: Constitutive models. *Continuum Mechanics and Thermodynamics*, 26:879–894.
- Keller, A. and Hutter, K. (2014c). A viscoelastic damage model for polycrystalline ice, inspired by Weibull-distributed fiber bundle models. Part II: Thermodynamics of a rank-4 damage model. *Continuum Mechanics and Thermodynamics*, 26:895–906.
- Lüthi, M. P. (2014). Little Ice Age climate reconstruction from ensemble reanalysis of Alpine glacier fluctuations. *The Cryosphere*, 8:639–650. doi:10.5194/tc-8-639-2014.
- Machguth, H. and Huss, M. (2014). The length of the glaciers in the world - a straightforward method for the automated calculation of glacier center lines. *The Cryosphere*, 8:2491–2528.
- Michel, L., Picasso, M., Farinotti, D., Funk, M., and Blatter, H. (2014a). Bedrock topography reconstruction of glaciers from surface topography and mass balance data. *Computational Geosciences*. DOI 10.1007/s10596-014-9439-6.

- Michel, L., Picasso, M., Farinotti, D., Funk, M., and Blatter, H. (2014b). Estimating the ice thickness of shallow glaciers from surface topography and mass-balance data with a shape optimization algorithm. *Computers & Geosciences*, 66:182–199.
- Nestler, A., Huss, M., Ambartzumian, R., and Hambarian, A. (2014). Hydrological Implications of Covering Wind-Blown Snow Accumulations with Geotextiles on Mount Aragats, Armenia. *Geosciences*, 4:73–92.
- Podrasky, D., Truffer, M., Lüthi, M., and Fahnestock, M. (2014). Quantifying velocity response to ocean tides and calving near the terminus of Jakobshavn Isbræ, Greenland. *Journal of Glaciology*, 60(222):609–621.
- Rogers, S., Fischer, M., and Huss, M. (2014). Combining glaciological and archaeological methods for gauging glacial archaeological potential. *Journal of Archaeological Science*, 52:410–420.
- Rööslü, C., Walter, F., Husen, S., Andrews, L., Lüthi, M. P., Catania, G. A., and Kissling, E. (2014). Sustained seismic tremors and icequakes detected in the ablation zone of the Greenland ice sheet. *Journal of Glaciology*, 60(221):563–575. doi:10.3189/2014JoG13J210.
- Ryser, C., Lüthi, M., Andrews, L., Catania, G., Funk, M., Hawley, R., Hoffman, M., and Neumann, T. (2014a). Caterpillar-like ice motion in the ablation zone of the Greenland Ice Sheet. *J. Geophys. Res. Earth Surf.*, 119:2258–2271. doi:10.1002/2013JF003067.
- Ryser, C., Lüthi, M., Andrews, L., Hoffman, M., Catania, G., Hawley, R., Neumann, T., and Kristensen, S. S. (2014b). Sustained high basal motion of the Greenland Ice Sheet revealed by borehole deformation. *Journal of Glaciology*, 60(222):647–660. doi:10.3189/2014JoG13J196.
- Walter, F., Chaput, J., and Lüthi, M. P. (2014). Thick sediments beneath Greenland’s ablation zone and their potential role in future ice sheet dynamics. *Geology*. doi:10.1130/G35492.1.