

Publication list, Gustaf Hugelius

(updated 2018-09-17)

Senior Lecturer, Department of Physical Geography, Stockholm University

Peer reviewed original articles

Čapek P, S Manzoni S, Kaštovká E, Wild B, Diáková K, Bárta J, Schnecker J, Biasi C, Martikainen PJ, Alves RJE, Guggenberger G, Gentsch N, **Hugelius G**, Palmtag J, Mikutta R, Shibistova O, Urich T, Schleper C, Richter A, Šantrůčková H (2018) A plant–microbe interaction framework explaining nutrient effects on primary production, *Nature Ecology & Evolution*, 1, <https://doi.org/10.1038/s41559-018-0662-8>

Treat CC, Marushchak ME, Voigt C, Zhang Y, Tan T, Zhuang Q, Virtanen TA, Räsänen A, Biasi C, **Hugelius G**, Kaverin D, Miller PA, Stendel M, Romanovsky V, Rivkin F, Martikainen PJ, Shurpali NJ (2018) Tundra landscape heterogeneity, not inter-annual variability, controls the decadal regional carbon balance in the Western Russian Arctic, *Global Change Biology*, doi: 10.1111/gcb.14421

Lindgren A, **Hugelius G** and Kuhry P (2018) Extensive loss of past permafrost carbon but a net accumulation into present day soils, *Nature*, <https://doi.org/10.1038/s41586-018-0371-0>

Šantrůčková H, Kotas P, Bárta J, Urich T, Čapek P, Palmtag J, Alves RJE, Biasi C, Diáková K, Gentsch N, Gittel A, Guggenberger G, **Hugelius G**, Lashchinsky N, Martikainen PJ, Mikutta R, Schleper C, Schnecker J, Schwab C, Shibistova O, Wild B and Richter A (2018) Significance of dark CO₂ fixation in arctic soils. *Soil Biology and Biochemistry*, 119, 11-21, <https://doi.org/10.1016/j.soilbio.2017.12.021>

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Faucherre S, Jørgensen CJ, Blok D, Weiss N, Siewert MB, Bang-Andreasen T, **Hugelius G**, Kuhry P and Elberling B.(2018). Short and long-term controls on active layer and permafrost carbon turnover across the Arctic. *Journal of Geophysical Research: Biogeosciences*, 123. <https://doi.org/10.1002/2017JG004069>

Fuchs M, Grosse G, Strauss J, Günther F, Grigoriev M, Maximov GM and **Hugelius G** (2018). Carbon and nitrogen pools in thermokarst-affected permafrost landscapes in arctic Siberia. *Biogeosciences*, 15(3), 953-971. <http://dx.doi.org/10.5194/bg-15-953-2018>

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Hugelius G. (2012) Spatial upscaling using thematic maps: an analysis of uncertainties in permafrost soil carbon estimates, *Global Biogeochemical Cycles*, 26, GB2026, doi:10.1029/2011GB004154.

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First-authored conference contributions

Hugelius G (2018) The carbon cycle in the northern permafrost region. Invited keynote plenary speaker, the fifth European conference on permafrost (EUCOP5), Chamonix, France

Hugelius G., Ahlström A., Canadell J., Koven C.D., Jackson R.B. and Luo Y. (2016) The representation of non-equilibrium soil types in earth system models and the potential to benchmark specific soil processes, AGU Fall Meeting 2016, San Francisco, USA.

Hugelius G, Loisel J, MacDonald G, Jackson RB, Treat C, Turetsky MR and Yu Z (2015) Consolidating and updating estimates of northern peatland extents and carbon stocks, AGU Fall Meeting 2015, San Francisco, USA.

Hugelius G. (2014) Estimating Soil Carbon Pools in the Northern Permafrost Region: Challenges in Adapting Datasets to Models, AGU Fall Meeting 2014, San Francisco, USA. Invited speaker.

Hugelius G, Strauss J, Zubrzycki S., Harden JW, Schuur EAG, Ping CL, Schirrmeister L, Grosse G., Michaelson GJ, Koven C, O'Donnell J, Elberling B, Mishra U., Camill P., Yu Z., Palmtag J and Kuhry P (2014) Estimated stocks of circumpolar permafrost carbon with quantified uncertainty ranges and identified data gaps, AGU Fall Meeting 2014, San Francisco, USA.

Hugelius G. (2013) Assessing uncertainties in circumpolar permafrost carbon maps by comparing them to local scale studies AGU Fall Meeting 2013, San Francisco, USA.

Hugelius G. and Tarnocai C. (2012) Storage of soil organic carbon in the upper 3 m of the northern circumpolar permafrost region, AGU Fall Meeting 2012, San Francisco, USA. Invited speaker

Hugelius G. (2011) Uncertainty analysis for estimates of soil organic carbon storage in permafrost terrain, a regional study from the western Russian Arctic, *AGU Fall Meeting 2011*, San Francisco, USA.

Hugelius G., T. Virtanen T., Kaverin D. and Kuhry P. (2010) Estimating soil organic carbon storage in periglacial terrain at very high resolution; a case study from the European Russian Arctic. *Third European Conference on Permafrost* (EUCOP III), Longyearbyen, Svalbard.

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Hugelius, G., and Kuhry P. (2008) Patterns in Soil Carbon Distribution in the Usa Basin (Russia): Linking Soil Properties to Environmental Variables in Constrained Gradient Analysis. *Ninth International Conference on Permafrost*, Fairbanks, USA.

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Book chapters and other scientific articles

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Hugelius G and Siewert M (2015) Patterns of carbon storage in a Siberian permafrost landscape in: INTERACT Stories of Arctic Science, edited by Callaghan T. and Savela, H, European Union 7th Framework

Humborg C., Andersen H.E., Blenckner T., Gadegast M., Giesler R., Hartmann J., **Hugelius G.**, Hürdler J., Kortelainen P., Mathiesen G.B., Venohr M. and Gesa Weyhenmeyer (2015) “Environmental Impacts—Freshwater” In: *Second Assessment of Climate Change for the Baltic Sea Basin*, Regional Climate Studies, BACC Author team, Heidelberg, Springer, doi: 10.1007/978-3-319-16006-1_17

Schuur E.A.G., B.W. Abbott, W.B. Bowden, V. Brovkin, P. Camill, J.P. Canadell, F.S. Chapin III, T.R. Christensen, J.P. Chanton, P. Ciais, P.M. Crill, B.T. Crosby, C.I. Czimczik, G. Grosse, D.J. Hayes, **G. Hugelius**, J.D. Jastrow, T. Kleinen, C.D. Koven, G. Krinner, P. Kuhry, D.M. Lawrence, S.M. Natali, C.L. Ping, A. Rinke, W.J. Riley, V.E. Romanovsky, A.B.K. Sannel, C. Schädel, K. Schaefer, Z.M. Subin, C. Tarnocai, M. Turetsky, K. M. Walter-Anthony, C.J. Wilson, S.A. Zimov (2011) High risk of permafrost thaw. *Nature*, 480, 32-33, doi:10.1038/480032a. *Editorial material*

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