
GRO BIRKEFELDT MØLLER PEDERSEN

Postdoctoral research fellow

July 8, 1982

Female

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Institute of Earth Science

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EDUCATION

PhD : Dept. Geology Aarhus University, Denmark	08/2008 – 04/2011
Supervisors: Dr. Nørnberg, Dr. Gunnlaugsson.	
Major collaborator: Prof. Head III	
MSc Geology : Dept. Geology Aarhus University, Denmark	08/2005 – 07/2008
BSc Geology : Dept. Geology Aarhus University, Denmark	08/2002 – 07/2005

PROFESSIONAL EXPERIENCE

Project manager of the Center for remote sensing , University of Iceland, Iceland	04/2019- present
Researcher , University of Iceland, Iceland	04/2019- present
Project leader , EMMIRS grant of excellence, University of Iceland, Iceland	04/2015- 03/2019
Post-doctoral research fellow , University of Iceland, Iceland	04/2015- 03/2019
Post-doctoral research fellow , Nordic Volcanological Center, Iceland	09/2013- 03/2015
Post-doctoral research fellow , University of Iceland, Iceland	01/2011- 08/2013
Graduate research fellow , Aarhus University, Denmark	08/2006- 12/2010
Research assistant , Hawaiian Volcano Observatory, USA	05/2010- 10/2010
Teaching assistant , Aarhus University, Denmark	05/2005- 10/2010

AWARDS, GRANTS AND FELLOWSHIPS

NERC International Opportunities Fund (Co-proposer) 37537£	2018-2020
Icelandic Research Council, Rannis, grant of Excellence (Co-proposer) 98.135 mio ISK	2015- 2018
Innviðarsjóður (Co-proposer), 3.695 mio ISK	2017
Tækjakaupasjóður Háskóla Íslands (Co-proposer), 2.0 mio ISK	2016
Goetz Instrument support program: ASD field spectrometer (Co-proposer)	2016
European Facility For Airborne Research – EUFAR (Co-proposer).	
NERC ARSF flight survey (LiDAR, hyperspectral and aerial photography) of Holuhraun	2015
AVCEI registration grant: 338€	2015
NORDVULK postdoctoral research fellowship (Nordic Council of Ministers)	2014-2015
NORDVULK postdoctoral research fellowship (Nordic Council of Ministers)	2013-2014
Danish Research Council (FNU), Postdoctoral grant: 1,200,833DKK (161,102€)	2011-2013
NORDVULK postdoctoral research fellowship (Nordic Council of Ministers)	2011-2012
Young Scientist's Travel Award (EGU): 338€	2011
Nordforsk grant: 900€	2009
Niels Bohr Fondet: 15,000DKK (2012€)	2008
Knud Højgaard's Fond: 15,000DKK (2012€)	2008
Dansk Geofysisk Forenings Rejselegat: 3000DKK (402€)	2007
Nordic Mineralogical Network: 10,000DKK (1342€)	2007
Nordplus: 1880€	2006
Etatsråd C. G. Filtenborg & hustru Marie Filtenborgs studielegat: 1000DKK (134€)	2006
American Fulbright Grantees 85,000DKK (11,404€)	2005

TEACHING AND SUPERVISION

Supervisor of Master student Alexander Thomas Merrington, University of Iceland	2019
Supervisor of Master student Rikke Vestergaard, Aarhus University	2018-2019
Supervisor of Master student Markus Koleszar, University of Iceland	2017-2018
Supervisor of Master student Tarun Devrani, Eberswalde University	2017-2018
Supervisor of Fulbright scholar Rose Rustowicz, Rochester Institute of Technology (RIT)	2015-2016
Supervisor of Master student Thórey Dagmar Möller, University of Iceland	2013-2014
NORDVULK summer school on remote sensing techniques in a dynamic geological Setting, Teaching lectures + practical's, University of Iceland.	2013
Object-based image analysis, Guest teacher in „Image processing and GIS in geological research“ University of Iceland	2013
Volcanology (8 ETCS), Teaching lectures + practicals, University of Iceland	2012
Fieldtrips on Reykjanes Peninsula (Organizer & guide), Nordic Volcanological Center	2011-2012
Introduction geologic mapping, Hawaiian Volcanological Observatory	2010
Principal Supervisor of BSc- project (10 ECTS, >40hr) Aarhus University	2008-2009
Minerals and Rocks (5 ECTS), Teaching Assistant (~170 hr) Aarhus University	2007-2009
Geochemistry (5 ECTS) Teaching Assistant (~160 hr), Aarhus University	2007
Rock Microscopy (5 ECTS) Teaching Assistant (~260 hr) Aarhus University	2006-2007
Philosophy of Science: Geology (5 ECTS), Teaching Assistant; Aarhus University	2005

PUBLICATIONS (PEER-REVIEWED)

Summary: Since 2010 the candidate has published 16 peer-reviewed journal articles (9 as first author) and 2 first-author entries to Springers Encyclopedia of Planetary landforms. Google Scholar H-index is 8 and i10-index is 8. Check: <https://scholar.google.is/citations?user=7sGKjOsAAAAJ&hl=en>

1. **Pedersen, G. B. M.**, Montalvo, J., Einarsson, P., Vilmundardóttir, O. K., Sigurmundsson, F. S., Belart, J. M. C., Hjartardóttir, Á.R., Kizel, F., Rostuwicz, R., Falco, N., Gísladóttir, G., Benediktsson, J.A. (2018) Historical lava flow fields at Hekla volcano, South Iceland. *Jökull* 68, 1-26.
2. Dumont S., Sigmundsson F., Parks M., Drouin V., **Pedersen G. B. M.**, Jónsdóttir I., Höskuldsson Á., Hooper A., Spaans K., Bagnardi, M., Gudmundsson M.T., Barsotti S., Hjartardóttir Á. R., Dürig T., Rossi C. (2018) Integration of SAR data into monitoring of the 2014-2015 Holuhraun eruption, Iceland: Contribution of the Icelandic Volcanoes Supersite and the FutureVoc projects. *Frontiers* <https://doi.org/10.3389/feart.2018.00231>
3. Tarquini, S., de' Michieli Vitturi, M., Jensen, E.H., **Pedersen, G.B.M.**, Barsotti, S., Coppola, D., Pfeffer, M. (2018) Modeling lava flow propagation over a flat landscape by using MrLavaLoba: the case of the 2014–2015 eruption at Holuhraun, Iceland. *Annals of Geophysics* <https://doi.org/10.4401/ag-7812>
4. Vilmundardóttir, O. K., F. S. Sigmundsson, **Pedersen, G. B. M.**, Belart, J. M. C., Kizel, F., Falco, N., Benediktsson, J. A., Gísladóttir, G. (2018). Of mosses and men- Plant succession, soil development and soil carbon accretion in the sub-Arctic volcanic landscape of Hekla, Iceland. *Progress in Physical Geography*, <https://doi.org/10.1177/0309133318798754>.
5. Halldórsson, S.A., Bali, E., Hartley, M. E., Neave, D.A., Peate, D.W., Guðfinnsson, G. H., Jakobsson, S. Bindeman, I., Whitehouse, M. J., **Pedersen, G. B. M.** et al. (2018). Petrology and geochemistry of the 2014-2015 Holuhraun eruption, central Iceland: compositional and mineralogical characteristics, temporal variability and magma storage, *CMP*, <https://doi.org/10.1007/s00410-018-1487-9>.
6. **Pedersen, G. B. M.**, Belart, J. M. C., Magnusson, E., Vilmundardóttir, O. K., Kizel, F., Sigmundsson, F. S., Gísladóttir, G., Benediktsson, J. A. (2018) Hekla volcano, Iceland, in the 20th century: Lava volumes, magma supply and effusion rates, *GRL*, doi: 10.1002/2017GL076887.
7. Kizel, F., Benediktsson, J.A., Bruzzone, L., **Pedersen, G. B. M.**, Vilmundardóttir, O. K., Falco, N. (2018) Simultaneous and Constrained Calibration of Multiple Hyperspectral Images Through a New Generalized Empirical Line Model, *IEEE J Sel Top Appl Earth Obs Remote Sens.* 2018. doi:10.1109/JSTARS.2018.2804666
8. **Pedersen, G. B. M.**, A. Höskuldsson, T. Dürig, T. Thordarson, I. Jónsdóttir, M.S. Riishuus, B.V. Óskarsson, S. Dumont, E. Magnusson, M.T. Gudmundsson, F. Sigmundsson, V.J.P.B. Drouin, C. Gallagher, R. Askew, J. Guðnason, W.M. Moreland, P. Nikkola, H. I. Reynolds, J. Schmith (2017) Lava

- field evolution and emplacement dynamics of the 2014-2015 basaltic fissure eruption at Holuhraun, Iceland, *JVGR*, <http://dx.doi.org/10.1016/j.jvolgeores.2017.02.027>.
9. Gudmundsson, M. T., Jónsdóttir, K., Hooper, A., Holohan, E. P., Halldórsson, S. H., Ófeigsson, B. G., Cesca, S., Vogfjörð, K. S., Sigmundsson, F., Högnadóttir, T., Einarsson, P., Sigmarsson, O., Jarosch, A. H., Jónasson, K., Magnússon, E., Hreinsdóttir, S., Bagnardi, M., Parks, M. M., Hjörleifsdóttir, V., Pálsson, F., Walter, T. R., Schöpfer, M. P. J., Heimann, S., Reynolds, H. I., Dumont, S., Bali, E., Gudfinnsson, G. H., Dahm, T., Roberts, M. J., Hensch, M., Belart, J. M.C., Spaans, K., Jakobsson, S., Gudmundsson, G. B., Fridriksdóttir, H. M., Drouin, V., Dürig, T., Aðalgeirsdóttir, G., Riishuus, M. S., **Pedersen, G. B. M.**, Boeckel, T. V., Oddsson, B., Pfeffer, M. A., Barsotti, S., Bergsson, B., Donovan, A., Burton, M. R., Aiuppa, A. (2016) Gradual caldera collapse at Bárðarbunga volcano, Iceland, regulated by lateral magma flow, *Science*, doi: 10.1126/science.aaf8988
 10. **Pedersen, G. B. M.** (2016) Semi-automatic classification of glaciovolcanic landforms: An object-based mapping approach based on geomorphometry, *JVGR*, doi:10.1016/j.jvolgeores.2015.12.015
 11. Gíslason, S.R., G. Stefánsdóttir, M.A. Pfeffer, S. Barsotti, Th. Jóhannsson, I.Galeczka, E. Bali, O. Sigmarsson, A. Stefánsson, N.S. Keller, A. Sigurdsson, B. Bergsson, B. Galle, V.C. Jacobo, S. Arellano, A. Aiuppa, E.S. Eiríksdóttir, S.Jakobsson, G.H. Guðfinnsson, S.A. Halldórsson, H. Gunnarsson, B. Haddadi, I. Jónsdóttir, Th. Thordarson, M. Riishuus, Th. Högnadóttir, T. Dürig, **G.B.M. Pedersen**, Á. Höskuldsson, M.T. Gudmundsson (2015) Environmental pressure from the 2014–15 eruption of the Bárðarbunga volcano, Iceland, *Geochem. Perspect. Lett* 1, 84-93, doi: 10.7185/geochemlet.1509
 12. **Pedersen, G. B. M.**, Grosse, P. (2014) Morphometry of subaerial and intraglacial volcanoes from Reykjanes Peninsula, Iceland: Effects of eruption environment, *JVGR*, doi: 10.1016/j.jvolgeores.2014.06.008.
 13. **Pedersen, G. B. M.** (2014) Chaos Terrain. In: Hargitai, H., Kereszturi (eds.) *Encyclopedia of Planetary Landforms*. Springer, Berlin, Germany.
 14. **Pedersen, G. B. M.** (2014) Ring-mold craters. In: Hargitai, H., Kereszturi (eds.) *Encyclopedia of Planetary Landforms*. Springer, Berlin, Germany.
 15. **Pedersen, G. B. M.**, 2013. Frozen Martian lahars? Evaluation of morphology, degradation and geologic development in the Utopia –Elysium transition zone. *Planetary and Space Science*, doi:10.1016/j.pss.2013.05.020.
 16. **Pedersen, G. B. M.**, Head III, J. W., 2010. Evidence of widespread degraded Amazonian-aged ice-rich deposits in the transition between Elysium Rise and Utopia Planitia, Mars: Guidelines for the recognition of degraded ice-rich materials. *Planetary and Space Science*, doi:10.1016/j.pss.2010.09.019.
 17. **Pedersen, G. B. M.**, Head III, J.W., 2010. Chaos formation by sublimation of volatile-rich substrate: Evidence from Galaxias Chaos, Mars. *Icarus*, doi:10.1016/j.icarus.2010.09.005.
 18. **Pedersen, G. B. M.**, Head III, J. W., Wilson, L., 2010. Formation, erosion and exposure of Early Amazonian dikes, dike swarms and possible subglacial eruptions in the Elysium Rise/Utopia Basin Region, Mars. *Earth Planet. Sci. Lett*, doi:10.1016/j.epsl.2009.08.010

PUBLICATIONS IN REVIEW/SUB./IN PREP. (PEER-REVIEWED)

- Pedersen, G. B. M.** Vilmundardóttir, O. K., Kizel, F., Belart, J. M. C., Falco, N., Sigurmundsson, F. S., Rostowicz, R., Gísladóttir, G., Benediktsson, J.A. (in prep.) Open benchmark repository of the Hekla volcano.
- Vestergaard, R., Tegner, C. and **Pedersen, G. B. M.** (in prep.) The 1845-46 and 1766-68 eruption at Hekla volcano: Lava volume, emplacement dynamics and geochemistry
- Pedersen, G. B. M.**, Grosse, P. (in prep.) The “typical” tuya: A diverse story on the morphometry of glaciovolcanic edifices from Iceland
- Pedersen, G. B. M. et al.** (in prep.) Glacier development and ice-volcano interactions on Hekla volcano.

CONFERENCE ABSTRACTS & PROCEEDINGS

2019

1. **Pedersen, G.B.M.**, Vilmundardóttir, O. K., Kizel, F., Belart, J. M. C., Falco, N., Sigurmundsson, F. S., Rustowicz, R., Gísladóttir, G., Benediktsson, J.A. (2019) Remote sensing benchmark data set of Hekla volcano, Iceland. NoRSC' 19, Aarhus, Denmark.
2. **Pedersen, G.B.M.**, Vilmundardóttir, O. K., Belart, J. M. C., Montalvo, J., Sigurmundsson, F. S., Einarsson, P., Hjartardóttir, Á. R., Kizel, F., Magnússon, E., Rustowicz, R., Falco, N., Gísladóttir, G., Benediktsson, J.A. (2019) Hekla volcano the last 1000 years: Integrating remote sensing data, soil and vegetation data.

2018

3. Friedl, B., Hölbling, D., Diettrich, J., Tiede, D., Saemundsson, T., Gudmundsson, S., **Pedersen, G. B. M.** Delineation of rock avalanche deposits on glaciers from different remote sensing data. Presented at EGU, Vienna, Austria.
4. Vilmundardóttir, O.K., Sigurmundsson, F.S., **Pedersen, G. B. M.**, Belart, J. M., Kizel, F., Falco, N., Benediktsson, J. A., Gísladóttir, G. 2018. Ecosystem development on Hekla volcano lava fields. Presented at the SER Europe Conference, 10-13 September, Reykjavík, Iceland.
5. Friedl, B., Hölbling, D., Tiede, D., Diettrich, J., Robson, B.A., Saemundsson, T., **Pedersen, G.B.M.**, Lang, S., 2018. Object-Based Tracking Of Rock Avalanche Deposits On Glaciers Using Multi-Temporal Remote Sensing Data. 38th EARSeL Symposium: Earth Observation Supporting Sustainability Research, Chania, Crete, Greece, 9-12 July 2018.
6. Friedl, B., Hölbling, D., Diettrich, J., Tiede, D., Saemundsson, T., Gudmundsson, S., **Pedersen, G.B.M.**, 2018. Delineation of rock avalanche deposits on glaciers from different remote sensing data. Geophysical Research Abstracts, Vol. 20, EGU General Assembly [2018-13689](#), Vienna, Austria.
7. **Pedersen, G. B. M.**, Belart, J. M. C., Magnusson, E., Vilmundardóttir, O. K., Kizel, Falco, N., F., Sigurdsson, F. S., Gísladóttir, G., Benediktsson, J. A. The evolution of Hekla volcano in the 20th century: Integrating remote sensing data from the past 70 years. Presented at Nordic Geological Winter Meeting, Copenhagen, Denmark.
8. **Pedersen, G. B. M.**, Vilmundardóttir, O. K., Kizel, F., Falco, N., Sigurdsson, F. S., Belart, J. M. C., Gísladóttir, G., Benediktsson, J. A. Environmental mapping and monitoring of Iceland by remote sensing (EMMIRS). Presented at Nordic Geological Winter Meeting, Copenhagen, Denmark.

2017

9. Diettrich, J., Friedl, B., Hölbling, D., **Pedersen, G. B. M.**, Saemundsson, T., Gudmundsson, S. Towards the Compilation of a Terrain-Corrected Backscatter Database of Glacio-Volcanic Land Cover Types. Presented at Geological Remote Sensing Group (GRSG) 28th Annual Conference, Lisbon, Portugal
10. Hölbling, D., Friedl, B., Diettrich, J., Cigna, F., **Pedersen, G.B.M.**, 2017. Combined interpretation of optical and SAR data for landslide mapping. Jemec Auflic, M., Mikos, M., Verbošek, T. (eds.), *Advances in Landslide Research*. Proceedings of the 3rd Regional Symposium on Landslides in the Adriatic-Balkan Region, Ljubljana, Slovenia.
11. **Pedersen, G. B. M.**, A. Höskuldsson, T. Dürig, T. Thordarson, I. Jónsdóttir, M.S. Riishuus, B.V. Óskarsson, S. Dumont, E. Magnusson, M.T. Gudmundsson, F. Sigurdsson, V.J.P.B. Drouin, C. Gallagher, R. Askew, J. Guðnason, W.M. Moreland, P. Nikkola, H. I. Reynolds, J. Schmith. 2017. Lava field evolution and emplacement dynamics of the 2014-2015 basaltic fissure eruption at Holuhraun, Iceland. Presented at IAVCEI, Portland, USA.
12. Dumont, S., F. Sigurdsson, A. Hooper, K. Vogfjörð, S. Hreinsdóttir, B. Ófeigsson, M. Pfeffer, D. Coppola, S. Barsotti, M. Ripepe, E. Eibl, C. Bean, E. Heimisson, M. Parks, M. T. Gudmundsson, K. Jónsdóttir, V. Drouin, **G. B. M. Pedersen**, Á. Höskuldsson, S. Halldórson and the IES field team. 2017. Spatial and temporal evolution of the plumbing system feeding the 2014-2015 fissure eruption at Holuhraun (Iceland) inferred from a multi-disciplinary approach. Presented at IAVCEI, Portland, USA.
13. Belart, J. M. C., **G.B.M. Pedersen**, F. Kizel, E. Magnusson, O. K. Vilmundardóttir, N. Falco, F. S. Sigurmundsson, G. Gísladóttir, S. Tarquini, Mattia de' Michieli Vitturi, J.A. Benediktsson. 2017. The evolution of Hekla volcano in the 20th century: Integrating remote sensing data from the past 70 years. Presented at IAVCEI, Portland, USA.
14. Vilmundardóttir, O. K., F. S. Sigurmundsson, **G. B.M. Pedersen**, F. Kizel, N. Falco, J. M.C. Belart, G. Gísladóttir and J. A. Benediktsson. 2017. Examining primary succession for the past 850 yrs on the lava-chronosequence of Hekla volcano in south Iceland. Presented at IAVCEI, Portland, USA.
15. Vilmundardóttir, O. K., F. S. Sigurmundsson, **G. B.M. Pedersen**, F. Kizel, N. Falco, J. M.C. Belart, G. Gísladóttir and J. A. Benediktsson. 2017. Examining primary succession for the past 850 yrs on the lava-chronosequence of Hekla volcano in south Iceland. Presented at ESA Portland, USA.
16. **Pedersen, G. B. M.**, A. Höskuldsson, M. S. Riishuus, I. Jónsdóttir, T. Thórdarson, T. Dürig, M. T. Gudmundsson, S. Dumont and the IES eruption Team. 2017. Lava field evolution and emplacement dynamics of the 2014-2015 basaltic fissure eruption at Holuhraun, Iceland. Presented at JFI, Reykjavík, Iceland.
17. **Pedersen, G. B. M.**, J. M.-C. Belart, O. K. Vilmundardóttir, N. Falco, F. Kizel, F.S. Sigurmundsson, R.

Rustowicz, G. Gísladóttir, and J. A. Benediktsson. 2017. The landscape evolution at Hekla volcano, Iceland: Integrating remote sensing data from the past 70yr. Presented at JFI, Reykjavík, Iceland.

2016

18. Falco, N., **G. B. M. Pedersen**, O. K. Vilmundardóttir, J. M.-C. Belart, F. S. Sigurdsson, F. Kizel and J. A. Benediktsson. 2016. Unsupervised Change Detection for Geological and Ecological Monitoring via Remote Sensing: Application on a Volcanic Area. Presented at AGU, San Francisco, USA.
19. Rossi, C., **G. B. M. Pedersen**, S. Dumont, M. Dirscherl. 2016. Geodetic exploitation of the 2014-2015 Bardarbunga unrest: volume variation history and lava tube evolution (155362). Presented at AGU, San Francisco, USA.
20. Dumont, S., F. Sigurdsson, A. Hooper, S. Hreinsdóttir, B. Ófeigsson, M. Parks, M. Pfeffer, K. Vogfjörð, S. Barsotti, E. Eibl, V. Drouin, E. Heimisson, **G. B. M. Pedersen**, Á. Höskuldsson, and the IES field team. Constraints on the plumbing system feeding the 2014-2015 fissure eruption at Holuhraun (Iceland) inferred from a multi-disciplinary approach. Presented at 18th General assembly of WEGENER, Ponta Delgada, Azores, Portugal.
21. **Pedersen, G. B. M.**, O. K. Vilmundardóttir, N. Falco, F. S. Sigurdsson, R. Rustowicz, J. M.-C. Belart, G. Gísladóttir, and J. A. Benediktsson. 2016. Environmental mapping and monitoring of Iceland by remote sensing (EMMIRS). Presented at EGU, Vienna, Austria.
22. **Pedersen, G. B. M.**, J. M.-C. Belart, O. K. Vilmundardóttir, N. Falco, F. S. Sigurdsson, R. Rustowicz, S. Tarquini, M.de' M. Vitturi, G. Gísladóttir, and J. A. Benediktsson. 2016. The landscape evolution at Hekla volcano, Iceland: Integrating remote sensing data from the past 70yr. Presented at EGU, Vienna, Austria.
23. **Pedersen, G. B. M.**, A. Höskuldsson, M. S. Riishuus, I. Jónsdóttir, T. Thórdarson, T. Dürig, M. T. Gudmundsson, S. Dumont and the IES eruption Team. 2016. Emplacement dynamics and lava field evolution of the flood basalt eruption at Holuhraun, Iceland: Observations from field and remote sensing data. Presented at EGU, Vienna, Austria.
24. Vilmundardóttir, O. K., F. S. Sigurdsson, **G.B.M. Pedersen**, N. Falco, R. Rustowicz, G. Gísladóttir, J. A. Benediktsson, 2016. Habitat mapping using hyperspectral images in the vicinity of Hekla volcano in Iceland. Presented at EGU, Vienna, Austria.
25. Harris, L., G. Llewellyn, C. MacLellan, M. Warren, D. Clewley, M. Grant, S. Goult, A. Mata, S. Groom, D. Coomes and **G. B. M. Pedersen**. 2016. Introduction to airborne thermal hyperspectral data processing with Specim's AisaOwl in the NERC Airborne Research Facility. Presented at RSPSoc, Nottingham, England

2015

26. Gudmundsson, M. T., T. Dürig, T. Hognadóttir, A. Höskuldsson, H. Björnsson, S. Barsotti, G. N. Petersen, T. Thórdarson, **G. B. M. Pedersen** and M. S. Riishuus., 2015 Large, Moderate or Small? The Challenge of Measuring Mass Eruption Rates in Volcanic Eruptions. Presented at AGU, San Francisco, USA.
27. Thórdarson, T., A. Höskuldsson, I. Jónsdóttir, **G. B. M. Pedersen**, M. T. Gudmundsson., T. Dürig, M. S. Riishuus, W. Moreland, J. Gudnason, C.R. Gallagher and R. A. Askew., 2015. Emplacement and Growth of the August 2014 to February 2015 Nornahraun Lava Flow Field North Iceland. Presented at AGU, San Francisco, USA.
28. (*Invited*) **Pedersen, G.B.M.**, A. Höskuldsson, M.S. Riishuus, I. Jónsdóttir, M.T. Gudmundsson, F. Sigurdsson, B.V. Óskarsson, V.J.P.B. Drouin, C. Gallagher, R. Askew, W.M. Moreland, T. Dürig, S. Dumont, Þ. Þórdarson and the IES eruption team. Nornahraun lava morphology and mode of emplacement. Presented at IUGG, Prague, Czech Republic.
29. **Pedersen, G. B. M.**, 2015. Semi-automatic mapping of volcanic landforms based on object-based image analysis and geomorphometry. Presented at IUGG, Prague, Czech Republic.
30. Jónsdóttir, I., Thórdarson, T., Höskuldsson, Á., Davis, D., Schneider, D., Wright, R., Kestay, L., Hamilton, C., Harris, A., Coppola, D., Gudmundsson, M. T., Dürig, T., **Pedersen, G. B. M.**, Drouin, V., Höskuldsson, F., Simonarson, H., Arnarson, G. Ö., Einarsson, M. Ö., Riishuus, M., 2015. Real-time satellite monitoring of Nornahraun lava flow NE Iceland. Presented at EGU, Vienna, Austria.
31. Tarquini, S., Vittuti, M. D. M., Jensen, E. H., Barsotti, S., **Pedersen, G. B. M.**, Coppola, D., 2015. Simulating the lava flow formed during the 2014-2015 Holuhraun eruption (Bardarbunga volcanic system, Iceland) by using the new F-L probabilistic code. Presented at EGU, Vienna, Austria.
32. Höskuldsson, A., Jónsdóttir, I., Riishuus, M., **Pedersen, G. B. M.**, Gudmundsson, M. T., Þórdarson, Þ., Drouin, V. J. P. B. And the Futurevolc IES field work team., 2015. Magma discharge and lava flow field growth in the Nornahraun/ Bardarbunga eruption in Iceland. Presented at EGU, Vienna, Austria.
33. **Pedersen, G. B. M.**, Höskuldsson, A., Riishuus, M., Jónsdóttir, I., Gudmundsson, M. T., Sigurdsson, F.,

Óskarsson, B. V., Dürig, T., Drouin, V. J. P. B., Gallagher, C., Askew, R., Moreland, W. M., Dumont, Þórdarson, Þ., 2015. Nornahraun lava morphology and mode of emplacement. Presented at EGU, Vienna, Austria.

34. **Pedersen, G. B. M.**, Höskuldsson, A., Riishuus, M., Jónsdóttir, I., Gudmundsson, M. T., Sigmundsson, F., Óskarsson, B. V., Dürig, T., Drouin, V. J. P. B., Gallagher, C., Askew, R., Moreland, W. M., Dumont, S., Davies, A., Keszthelyi, L., Hamilton, C. W., Þórdarson, Þ., 2015. Nornahraun lava morphology and emplacement: A new terrestrial analogue for planetary lava flows. Presented at 46th LPSC, The Woodlands, Texas, USA.

≤ 2014

35. **Pedersen, G. B. M.**, Gallagher, C.R., Reynolds, H.I. and the IES eruption team, 2014. Holuhraun: lava flow morphologies and emplacement mechanisms. Paper for The Icelandic Geological Society, Reykjavik, Iceland
36. (*Keynote*) **Pedersen, G. B. M.**, Grosse, P., 2014. Insights into subglacial eruptions based on geomorphometry: Broad scale analysis of subglacial edifices in Iceland. Presented at EGU, Vienna, Austria.
37. (*Invited*) **Pedersen, G. B. M.**, Grosse, P., 2013. Morphometric analysis of glaciovolcanic edifices in Iceland. Presented at EPSC, London, United Kingdom.
38. **Pedersen, G. B. M.**, 2013. Frozen martian lahars? Evidence from Utopia-Elysium flows. Presented at IAVCEI, Kagoshima, Japan.
39. **Pedersen, G. B. M.**, Grosse, P., 2013. Morphometric extraction of the passage zone: Broad scale analysis of subglacial edifices in Iceland. Presented at IAVCEI, Kagoshima, Japan.
40. Einarsson, P., Hjartarsdóttir, A.R., Michalczewska, K., Ágústadóttir, T., **Pedersen, G. B. M.**, Magnúsdóttir, S. et al., 2013. Fault systems within the Reykjanes Peninsula Oblique Rift near Geitafell. Presented at JFI 22nd spring conference, Reykjavík, Iceland.
41. **Pedersen, G. B. M.**, Head J. W., 2013. Frozen martian lahars? Emplacement mechanisms and geologic impact of Utopia-Elysium flows. Presented at 44th LPSC, The Woodlands, Texas, USA.
42. **Pedersen, G. B. M.**, Grosse, P., 2013. Topographic fingerprints of eruption environment: Evidence from Reykjanes Peninsula, Iceland. Presented at 44th LPSC, The Woodlands, Texas, USA.
43. **Pedersen, G. B. M.**, Grosse, P., 2012. Identification of topographic fingerprints of eruption environments: Geomorphometric evidence from volcanoes of the Reykjanes Peninsula, Iceland. Presented at AGU, San Francisco, California, USA.
44. **Pedersen, G. B. M.**, Head III, J. W., 2012. Evidence of complex ice-volcano interactions in the transition zone between Elysium Rise and Utopia Basin. Print-only abstract at 43rd LPSC, The Woodlands, Texas, USA.
45. **Pedersen, G. B. M.**, 2012. Diagnostic criteria for icelandic volcanic landforms based on remote sensing data: constraints on morphology and optimization of mapping methodologies. Presented at Nordic Geological winter meeting, Reykjavík, Iceland.
46. **Pedersen, G. B. M.**, 2011. Bridging fieldwork and remote sensing data: Pilot study of diagnostic criteria for Icelandic volcanoes to optimize analysis of volcanic landforms. Presented at AGU, San Francisco, California, USA.
47. **Pedersen, G. B. M.**, Head III, J. W., 2011. Evidence of widespread degraded Amazonian-aged ice-rich deposits in the transition between Elysium Rise and Utopia Planitia, Mars: Guidelines for the recognition of degraded ice-rich materials. Presented at EGU, Vienna, Austria.
48. **Pedersen, G. B. M.**, 2010. Observed degradation stages of ring-mold craters (RMC): Geomorphic evidence for modification of ice-rich deposits in the transitions zone between Elysium and Utopia Basin, Mars. Presented at 41. LPSC, The Woodlands, Texas, USA.
49. **Pedersen, G. B. M.**, Head III, J. W., Wilson, L., 2009. Early Amazonian dike swarms in Utopia Basin, Mars: Nature of substrate and estimates of effusion rates. Presented at 40th LPSC, The Woodlands, Texas, USA.
50. **Pedersen, G. B. M.**, Head III, J. W., 2009. Overview of Possible Ice-Related Morphologies in the transition zone between Elysium and Utopia Basin, Mars. Presented at 40th LPSC, The Woodlands, Texas, USA.
51. **Pedersen, G.B.M.**, 2009. Dikes and dike swarms on Mars. Presented at Magma Chamber Process XV, Aarhus, Denmark.
52. **Pedersen, G. B. M.**, Head III, J. W., 2008. Amazonian dike swarm in Utopia Basin, Mars. Presented at AGU, San Francisco, California, USA.
53. **Pedersen, G. B. M.**, Head III, J. W., 2008. Geomorphic characteristic for Amazonian dike swarm in Utopia Basin, Mars. Presented at EPSC, Münster, Germany.
54. **Pedersen, G. B. M.**, Hauber, E., Nørnberg, P., 2008. Characteristics of Galaxias Chaos, Mars; Implication for formation models. Presented at 39th LPSC, Leage City, Texas, USA.

55. **Pedersen, G.B.M.**, Wilson, J.R., 2005. Classification of a meteorite. Presented at Magma Chamber Processes XIII, Aarhus, Denmark.

POPULAR SCIENCE PUBLICATIONS

Gunnlaugsson, H. P., **Pedersen, G. B. M.**, Madsen, M. B., 2010. Geologi på Mars. In: Brun, L., Pedersen, K. (eds.) Dansk astronomi i kikkerten. Sangill Grafisk, Danmark. p. 102-111 (*Book section*).

Pedersen, G. B. M., 2009. Liv i universet- er vi alene ?, Geologisk Nyt v. 01, p. 8 (*Book review*).

Pedersen, G. B. M., 2008. Mars' nordligste feltgeolog- Phoenix Mars Lander. Geologisk Nyt 4, .4-7 (*Publication*).

Pedersen, G. B. M., 2008. Mars "in action", Geologisk Nyt v. 01, p.21 (*Publication*).

Pedersen, G. B. M., 2007. The surface of Mars – Boganmeldelse, Geologisk Nyt v. 07, p.8 (*Publication*).

Pedersen, G. B. M., 2004. Geologi midt i byen – spektakulære fænomener inden for rækkevidde, Geologisk Nyt v. 04, p. 24-25 (*Publication*).

TALKS, PRESS & PUBLIC OUTREACH

Participation (Interviews and organization) in BBC documentary "Space volcanoes", New Horizon	05/2017
Talk for employees at Arctic Adventure: "Volcanoes in Iceland"	04/2017
Talk for high school teachers, University of Iceland: "Iceland: Glaciers, earthquakes and volcanoes"	09/2015
Interview with the Icelandic public news RUV: Topic Bárðarbunga activity (18-01)	01/2015
Interview with the Icelandic public news RUV: Topic Bárðarbunga activity (12-10)	10/2014
Interview with the Danish newspaper Politiken. Topic: Bárðarbunga activity (23-08)	08/2014
Interview with the Danish newspaper Ekstra bladet. Topic: Bárðarbunga activity (31-08)	08/2014
Talk for high school teachers, University of Iceland: "Iceland: Glaciers, earthquakes and volcanoes"	10/2013
Talk for high school students, University of Iceland: "Iceland: Glaciers, earthquakes and volcanoes"	09/2013
Talk for high school teachers, University of Iceland: "Iceland: Glaciers, earthquakes and volcanoes"	10/2012
Interview-based article with science blog www.videnskab.dk. Topic: Landscapes of Mars	05/2011
Interview-based article with science blog www.videnskab.dk. Topic: Impact cratering on the moon	09/2010
Interview live with the Danish radio channel P4. Topic: Eyjafjallajökull eruption	04/2010

PROFESSIONAL ASSOCIATIONS & SERVICE

Scientific reviewer for Journal of Geophysical Research, Applied Earth Observation and geoinformation, International journal of Remote Sensing and Planetary Space Science	
Organizer of 3-day workshop "Environmental Mapping and Monitoring of Iceland by Remote Sensing", University of Iceland	2017
Organizer of Nordic volcanological summerschool	2013
Organizer of „Mapping and Classification“ one-day seminar, University of Iceland	2013
Member of European Geophysical Union (Since 2011)	
Member of Iceland geological society (Since 2011)	
Member of American Geophysical Union (Since 2011)	
Organizer of Department-Lectures, University of Iceland	2011-2012
PhD student association, committee member	2009-2010
Organizer of Department-Lectures, Aarhus University	2006-2009
Students' association, committee member	2004-2005
UNF (Youth Science Organization), committee member	1998 – 2000 & 2003-2005

ORGANISATIONAL SKILLS, TECHNICAL SKILLS AND LANGUAGES

Organisational skills: Project manager for the Center of remote sensing (crs.hi.is) and project leader for the grant of excellence project No. 152266-052 (EMMIRS).

Operating systems: MacOS X, Win 7/Vista/2000/XP

Applications: ESRI GIS software (highly proficient), R (proficient), eCognition (proficient), ERDAS IMAGINE (proficient), Matlab (beginner), Python (beginner)

Languages: Danish (mother tongue), English (highly proficient), Icelandic (highly proficient), German (proficient).

MISCELLANEOUS

Member of the Icelandic rescue team: ICE-SAR, HSG

Sports: climbing, running, hiking, Indian classical dance, diving (CMAS), kayaking, photography.

PROFESSIONAL REFERENCES

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