

Heather M. Reese
Senior Lecturer in Remote sensing and GIS

EDUCATION

- 2011 Ph.D. from Swedish University of Agricultural Sciences, Umeå, Sweden. Major: Forest Management with specialty in Remote Sensing. Main supervisor is Prof. Håkan Olsson. Title of the Ph.D. thesis: 'Classification of Sweden's Forest and Alpine Vegetation Using Optical Satellite and Inventory Data'.
- 1995 M.Sc., University of Wisconsin-Madison, Madison, WI, USA. Major: Environmental Monitoring. Main supervisor: Prof. Thomas Lillesand. Thesis title: "The Utility of Multi-temporal Digital Landsat Data and Ancillary Data for Land Cover Classification in the Brazilian Amazon"
- 1986 B.A., Major: Anthropology (Archaeology emphasis), Department of Anthropology, University of Montana-Missoula, USA.
- 1986 B.A., Major: Psychology, Department of Psychology, University of Montana-Missoula, USA.

MAJOR EMPLOYMENT

- 2018 – Senior Lecturer in Remote Sensing and Geographic Information Systems at Department of Earth Sciences, University of Gothenburg, Sweden.
- 2012-2018 Senior Lecturer and Head of Section, Division of Forest Remote Sensing, Department of Forest Resource Management, Swedish University of Agricultural Sciences (SLU), Umeå, Sweden
- 1998-2012 Research Assistant, Division of Forest Remote Sensing, Department of Forest Resource Management, Swedish University of Agricultural Sciences (SLU), Umeå, Sweden

MERITS

- 2016 Docent (Associate Professor), Swedish University of Agricultural Sciences, Umeå, Sweden.

AWARDS

- 2021 Pedagogical Award, Faculty of Science, University of Gothenburg

SUPERVISION OF GRADUATE STUDENTS

- 2022- PhD student, C. Renette, Department of Earth Sciences, U. Gothenburg; main supervisor
- 2019- PhD student, A. Patchett, Department of Earth Sciences, U. Gothenburg; assistant supervisor
- 2018 – PhD student J. Kukulies, Department of Earth Sciences, U. Gothenburg; assistant supervisor
- 2018 - PhD student M. Persson, Linné University; assistant supervisor
- 2018 - PhD student S. Wolters, Swedish Univ. of Ag. Sciences; assistant supervisor
- 2017 - PhD student A. Axelsson, Swedish Univ. of Ag. Sciences; assistant supervisor
- 2011-2018 PhD student Mona Forsman, Swedish Univ. of Ag. Sciences; assistant supervisor
- 2013-2017 PhD student Eva Husson, Swedish Univ. of Ag. Sciences; assistant supervisor
- 2011-2015 PhD student Martin Karlsson, Linné University; assistant supervisor
- 2013-2022 Supervision and co-supervision of > 10 MSc students, > 10 BSc students

SELECTED FUNDED RESEARCH GRANTS SINCE 2016

- 2021-2023 “Heat stress in tropical trees and its implications for tree plantation success, forest carbon storage and biodiversity”, Formas, Main applicant, J. Uddling Frodin, Co-applicant: H., Reese, U of Gothenburg. 3 msek.
- 2021-2023 “Would the Northern European Enclosure Dam really protect Sweden from sea level rise?”, Formas, Main applicant, C. Heuzé, Co-applicant: H., Reese, U of Gothenburg. 3.9 msek
- 2019–2022 “New ways to enable reliable validation of greenhouse gas models and assessments”, Formas, Main applicant, D. Bastviken, Linköping Univ. Co-applicant: H., Reese, U of Gothenburg. 10,000,000 sek.
- 2019-2021 “Towards improved understanding of albedo-climate interaction of common land uses across Sweden” MERGE, A. Reurslag-Gärdenäs, U of Gothenburg , Co-applicant: H., Reese, U of Gothenburg. 550 tsek.
- 2017 – 2020 “An integrated approach to explore the unknown role of trees in dryland crop production” Swedish National Space Board Research Grant (“Rymdstyrlesen”). Main applicant, M. Ostwald (Chalmers Univ./Linköping Univ.). Co-applicants: H., Reese, SLU, L. Eriksson and M. Soja, Chalmers Univ., M. Karlson, Linköping Univ. 4,200,000 sek
- 2016-2019 “Iterative land cover classification using assimilation of multiple Sentinel-2 images with Hidden Markov Models.” Swedish National Space Board Research Grant Main applicant: H. Reese, SLU. Co-applicants: E. Lindberg, H. Olsson, and A. Grafström, SLU. 3,100,000 SEK

SELECTED ADMINISTRATIVE ASSIGNMENTS

- 2022 – Deputy head of Department, Dept. of Earth Sciences, Univ. of Gothenburg
- 2021-2022 Vice-head of research, Dept. of Earth Sciences, Univ. of Gothenburg
- 2021-2022 Member Faculty of Science Committee for Research and Research Infrastructure, Univ. of Gothenburg
- 2019-2022 Chairperson, Dept. of Earth Sciences, Strategy group
- 2018–2022 Member of the Department of Earth Sciences advisory board (Institutionsråd)
- 2012-2018 Section Head, Section of Forest Remote Sensing, Swedish Univ. of Ag. Sci. Economic and personnel responsibility for 23 people. Two 6 week Leadership training courses.

SELECTED BOARD AND INTERNATIONAL ASSIGNMENTS

- 2021–present Steering committee ICOS-Sweden
- 2018 - present Board member GIS-Väst
- 2021- present Board member Skogaryd Research Station in SITES
- 2013-present Sweden’s National Delegate for Research in European Spatial Data Research (EuroSDR)
- 2014 NASA Grant review panel

CURRENT MAIN TEACHING RESPONSIBILITIES

- 2018–present Course leader and main lecturer for 7.5 hp BSc course “Remote Sensing and GIS”, U of Gothenburg
- 2018–present Course leader and main lecturer for 7.5 hp BSc distance course “GIS: Introduction to Remote Sensing”, University of Gothenburg
- 2020-2021 Course leader for 15 hp BSc course “Methods in Geoscience”, U of Gothenburg
- 2021-2022 Course leader, 5 hp PhD course “AI in Earth and Environmental Sciences”, U of Gothenburg

COOPERATION WITH SOCIETY

- 2021- Active in AI Sweden
- 2013 - Member Reference Group and Working Group, Naturvårdsverket, National Land Cover Data
- 2002-2005 Project leader in National Land Cover Data together with Metria and Naturvårdsverket
- 2018 - Fönster mot natur, Science for High School Students

BIBLIOMETRY (based on Google Scholar, 2022-04-07)

Number of peer-reviewed papers: 31

Number of citations: 1950

h-index: 18

i10-index: 24

SELECTED LIST OF TEN PUBLICATIONS

Full publication list is found at <https://scholar.google.com/citations?hl=sv&user=FUWolocAAAAJ>).

1. Minola, L. H Reese, HW Lai, C Azorin-Molina, JA Guijarro, SW Son and D. Chen. 2022. Wind stilling - reversal across Sweden: The impact of land - use and large - scale atmospheric circulation changes. *International Journal of Climatology* 42 (2), 1049-1071.
2. Scharn, R., CG Brachmann, A Patchett, H Reese, A Bjorkman, J Alatalo, Robert G Björk, Annika K Jägerbrand, Ulf Molau, Mats P Björkman. 2021. Vegetation responses to 26 years of warming at Latnjajaure Field Station, northern Sweden. *Arctic Science*. doi.org/10.1139/AS-2020-0042
3. Karlson, M., D Bastviken, H Reese. 2021. Error Characteristics of Pan-Arctic Digital Elevation Models and Elevation Derivatives in Northern Sweden. *Remote Sensing* 13 (22), 4653.
4. Axelsson, A, Lindberg, E., Reese, H., Olsson, H., 2021. Tree species classification using Sentinel-2 imagery and Bayesian inference. *Int. J. of Applied EO and Geoinformation*, 100, 102318.
5. Wolters, S. M Söderström, K Piikki, H Reese, M Stenberg. 2021. Upscaling proximal sensor N-uptake predictions in winter wheat (*Triticum aestivum* L.) with Sentinel-2 satellite data for use in a decision support system. *Precision Agriculture* 22 (4), 1263-1283.
6. Olvmo M, Holmer B, Thorsson S, Reese H and Lindberg F. 2020. Sub-arctic palsa mire degradation and the role of climatic drivers in the largest coherent palsa complex in Sweden, 1955-2016. *Scientific Reports*, 10(1).
7. Persson, M., Lindberg, E., and Reese, H., 2018. Tree species classification with multi-temporal Sentinel-2 data. *Remote Sens.* 2018, 10(11), 1794.
8. Karlson, M., Ostwald, M., Reese, H., Sanou, J., Tankoano, B., Mattsson, E., 2015. Mapping tree canopy cover and aboveground biomass in Sudano-Saharan woodlands using Landsat 8 and Random Forest. *Remote Sensing* 7(8):10017-10041.
9. Reese, H., Nordkvist, K., Nyström, M., Bohlin, J., and Olsson, H., 2015. Combining point clouds from image matching with SPOT 5 multispectral data for mountain vegetation classification. *International Journal of Remote Sensing*, Vol. 36 (2): 403-416.
10. Bargaés-Tobella, A., Reese, H., Almaw, A., Malmer, A., Laudon, H., Nyberg, G., Bayala, J., and Ilstedt, U., 2014. The effect of trees on preferential flow and soil infiltrability in an agroforestry parkland in semiarid Burkina Faso. *Water Resources Research*, Vol. 50(4): 3342–3354.

RECENT POPULAR SCIENCE ARTICLES

Olvmo, M., Holmer, B., Thorsson, S., and Reese, H. 2020. Vissatvuopmi palsmyr – en naturtyp på väg att försvinna. Geologisk Forum.