CURRICULUM VITAE – Matthias Huss, Dr. sc. nat.

Personal Data

Date of birth: 9 March 1980
Nationality: Swiss
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Education

2010	**Didaktischer Ausweis**, Geography; permission to teach at Swiss High School
2009	**PhD**, Glaciology, ETH Zurich, Switzerland. Thesis title: "Past and future changes in glacier mass balance" (advisors: Prof. M. Funk, Dr. A. Bauder)
2005	**Diploma (MSc)**, Earth Sciences, ETH Zurich, Switzerland
1993-2000	**High School**, Wetzikon, Switzerland

Employment history

since 2013	**Senior researcher (70%)**, Laboratory of Hydraulics, Hydrology and Glaciology (VAW), ETH Zurich, Switzerland, jointly at Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Birmensdorf, Switzerland since 10.2019
2020	**Visiting Scientist**, Department of Geosciences, University of Oslo, Norway
since 2009	**Senior lecturer (20%)**, Department of Geosciences, University of Fribourg, Switzerland
2013	**Visiting Scientist**, Geophysical Institute, University of Alaska Fairbanks, Alaska, USA
2010	**High school teacher, Geography (25%)**, Kantonsschule MNG Rämibüel, Zurich
2005–2009	**Research Associate**, Laboratory of Hydraulics, Hydrology and Glaciology (VAW), ETH Zurich, Switzerland

Publications (for details, see separately provided publication list)

- Peer-reviewed journal articles (2007-2023): **166** (thereof as first author: **29**)
- Total citations 2007-2023 according to *Google Scholar* (Dec. 2023): **17'056**; h-index: **67**
- Total citations 2007-2023 according to *Web of Science* (Dec. 2023): **10'529**; h-index: **53**

Most important publications (selected amongst articles with more than 300 citations):

Hugonnet, …, Huss et al. (2021). Accelerated global glacier mass loss in the early twenty-first century. *Nature*.
Farinotti, Huss et al. (2019). A consensus estimate for the ice thickness distribution of all glaciers on Earth. *Nature Geoscience*.
Zemp, Huss et al. (2019). Global glacier mass changes and their contributions to sea-level rise from 1961 to 2016. *Nature*.
Huss and Hock (2018). Global-scale hydrological response to future glacier mass loss. *Nature Climate Change*.
Huss et al. (2017). Toward mountains without permanent snow and ice. Earth's Future.
Huss and Hock (2015). A new model for global glacier change and sea-level rise. *Frontiers in Earth Science*.
Huss (2013). Density assumptions for converting geodetic glacier volume change to mass change. *The Cryosphere*
Huss and Farinotti (2012). Distributed ice thickness and volume of all glaciers around the globe. *Journal of Geophysical Research.*
Huss (2011). Present and future contribution of glaciers to runoff from macroscale drainage basins in Europe. *Water Resour. Res.*
Huss et al. (2008). Modelling runoff from highly glacierized alpine drainage basins in a changing climate. *Hydrological Processes.*

Conference contributions

- Lead / co-convener at the European Geophysical Union, Vienna, Austria (since 2012)
- Lead convener at the Swiss Geoscience Meeting, Switzerland (since 2016)
- Presentations of first-author contributions (talks/posters) at
  European Geosciences Union (2006,2007,2009,2010,2011,2012,2013,2014,2016,2019,2021,2022)
  American Geophysical Union (2008,2013,2014,2015)
  International Union of Geodesy and Geophysics (2015)
  International Glaciological Society Symposia (2006,2008,2012)
  and various smaller conferences

Institutional responsibilities

Since 1.2016	**Head of the Swiss glacier monitoring network (GLAMOS)**, hosted at VAW-ETH Zurich

Approved Research Projects

1.2024–12.2027 Swiss Federal Office for the Environment, MeteoSwiss, SCNAT (**main applicant**)
"GLAMOS: Glacier Monitoring Switzerland"; amount: 1'294'400-

5.2023–4.2027 Swiss National Science Foundation, Grant-Nr. 209531, Indo-Swiss call (**main applicant**)
"*21st century evolution of small glaciers in the Himalaya (ETERNALHIMA)"*; amount: 349'962.-

1.2023–12.2024 MeteoSwiss (**main applicant**)
"Tapping the potential of repeat altimetry to study glacial and periglacial processes"; amount: 278'000.-

1.2020–12.2023 Swiss Federal Office for the Environment, MeteoSwiss (GCOS), SCNAT (**main applicant**)
"GLAMOS: Glacier Monitoring Switzerland"; amount: 1'000'000.-

1.2020–12.2023 EU Horizon 2020, (**co-applicant**)
"The changing Cryosphere: uncertainties, risks and opportunities (PROTECT)"; amount: ca. 230'000.-

9.2019–12.2020 MeteoSwiss (**main applicant**)
"Rescue, documentation and re-analysis of glacier monitoring data"; amount: 121'400.-

4.2019–3.2023 Swiss National Science Foundation, Grant-Nr. 200021_184634 (**co-applicant**)
"Process-based modelling of global glacier changes (PROGGRES)"; amount: 742'582.-

5.2016–4.2019 Swiss National Science Foundation, Grant-Nr. 162502 (**main applicant**)
"*Resolving the paradox of the Little Ice Age in Europe: Why glacier retreat started before atmospheric warming"*; amount: 183'508.-

Supervision of junior researchers

Completed *PhD* theses (Daily Advisor ***DA*** / Co-Supervisor ***CS***): **4 / 5**

2015: Jeannette Gabbi, ETH Zurich (***CS***)
2015: Leo Sold, University of Fribourg (***DA***)
2017: Kathrin Naegeli, University of Fribourg (***DA***)
2018: Mauro Fischer, University of Fribourg (***DA***)
2018: Martina Barandun, University of Fribourg (***DA***)
2021: Rebecca Gugerli, University of Fribourg (***CS***)
2021: Johannes Landmann, ETH Zurich (***CS***)
2021: Luisa Pruessner, ETH Zurich (***CS***)
2022: Loris Compagno, ETH Zurich (***CS***)

Ongoing *PhD* theses (main advisor / committee member): **2 / 0**

2021 – : Aaron Cremona, ETH Zurich (***DA***)
2023 – : Alexandra von der Esch, ETH Zurich (***DA***)

Main supervision of scientific assistants and PostDocs:

2016-19: Simon Förster, ETH Zurich, project assistant
2015-18: Mauro Werder, ETH Zurich, PostDoc
2019-21: Claudia Kurzböck, ETH Zürich, project assistant
2020-21: Lea Geibel, ETH Zürich, project assistant
2021-23: Harry Zekollari, ETH Zürich, PostDoc

Main supervision of *MSc* theses: **12**

University of Fribourg: Sovik Kumar Nath (2010), Ambrogio Foletti (2010), Mazzal Stokvis (2013), Alexander Nestler (2014), Johnathan Rossy (2015), Martina Patelli (2016), Armando Bodeo (2016), Morane Fahrni (2017), Hans Broschek (2018)

ETH Zürich: Nadia Signer (2014), Vanessa Round (2017), Leo Hösli (2024)

+1-3 BSc theses per year (no detailed list provided)

Teaching activities

- Courses at Bachelor / Master level at the ***ETH Zurich*** (2014-2023):
  651-3561-00L *Kryosphäre*
- Courses at Bachelor / Master level at the ***University of Fribourg*** (2009-2023):
  GG.0101 Introduction aux Géosciences
  GG.0253 Introduction à la Cryosphère
  GG.0448 Modelling of Glaciers and Permafrost
- Guest Lecturer at the ***University centre in Svalbard (UNIS)*** (2014-2017):
  AG-325 *Glaciology*

Service to the community

- *Contributing Author* (WG I, Chapter 4) to the 5th assessment report of the Intergovernmental Panel on Climate Change (IPCC) (2014)
- *Contributing Author*, IPCC Special Report on Ocean and Cryosphere in a Changing Climate (2019)
- Member of the *Research Council of Norway* (2019)
- *Scientific Editor* for Frontiers in Earth Science (since 2015)

- *Scientific Editor* for Annals of Glaciology (2012)
- *National Correspondent to the World Glacier Monitoring Service* (since 2015)
- *Member* of the "Glacier Model Intercomparison Project (GlacierMIP)", a Climate and Cryosphere (CliC) targeted activity
- Active *Member* of the International Association of Cryospheric Sciences (IACS) working groups on "Glacier ice thickness estimation (2014-2018)", "Regional Assessments of Glacier Mass Change (2019-2024)", and "Randolph Glacier Inventory (2020-2024)".
- *Committee member* on PhD panels (2015: Rainer Prinz, University of Innsbruck, 2016: Marion Réveillet, LGGE Grenoble, 2017: Daphné Freudiger, University of Freiburg, 2018: Fanny Brun, LGGE Grenoble, 2023: Suvrat Kaushik, Université Savoie Mont Blanc)
- *Reviewer for various funding agencies* (e.g. Swiss National Science Foundation (CH), Deutsche Forschungsgemeinschaft (DE), National Science Foundation (US), etc.)
- *Reviewer for various journals*: >100 papers since 2008 (e.g. *Nature, Science, Nature Climate Change, Proceedings of the National Academy of Sciences, Geophysical Research Letters, Journal of Geophysical Research, The Cryosphere, Journal of Glaciology, Annals of Glaciology, Water Resources Research, Hydrology and Earth System Sciences, Journal of Hydrology, Hydrological Processes, Climatic Change, Natural Hazards, Geomorphology, Earth Surface Processes and Landforms, Remote Sensing of the Environment, etc.)*

Active memberships in scientific societies

- *President* of the Swiss Society for Snow, Ice and Permafrost (SEP) (since 2018)
- *President* of the Swiss Commission on Cryosphere Observation *(*SCC*)* (since 2024)
- *Member* of the Swiss commission on Remote Sensing (2014-2023)
- *Member* of the International Glaciological Society (IGS) since 2012, including service in the IGS Council (2018-2023)

Prizes, Awards, Fellowships

Nov. 2023	***Clarivate Highly Cited Researcher*** 2022 and 2023
Oct. 2023	***European Climate Journalism Award 2023*** (as member of an interdisciplinary team)
Apr. 2023	*Swiss Press Award*, 2nd rank, category Swiss press online
June 2015	***Early Career Award*** by the International Union of Geodesy and Geophysics (IUGG)
Apr. 2014	***Arne Richter Award*** for outstanding young scientists by the European Geosciences Union
Dec. 2013	***Cryosphere Young Investigator Award*** by the American Geophysical Union (AGU)
Dec. 2012	*"Editors' Choice Award*" for the best paper of the year by Water Resources Research
April 2010	*"Young Scientists Outstanding Poster Paper Award"* by the EGU
Aug. 2006	*"Best Student Poster Presentation"* by the Int. Association of Cryospheric Sciences (IACS)
Dec. 2005	*"Medal of the ETH Zurich"* for an outstanding Diploma (MSc) thesis
Dec. 2005	*"Willi-Studer Preis"* for the best student of the age group

Outreach

- Regular popular-science presentations to a lay public (societies, schools etc): **>50** (since 2016)
- Active science communication on social media (Twitter / X, @matthias_huss, >6500 followers)
- Policy advisor (contributions to int. climate conferences, advisory board member of the "Glacier initiative")
- Frequent interviews in national and international media, and contribution to film documentaries:

  Approx. average contributions 2020-2023: **ca. 50 per year in print/online, ca. 10 per year in TV/radio**

  Selected examples (2020-2023):

Print/online:

09.2021: (FR) France24 (via AFP), Link
10.2021: (CH) NZZ Magazin, Link
03.2022: (UK) National Geographic, Link
07.2022: (CH) Tages Anzeiger Interaktiv, Link
07.2022: (CH) NZZ am Sonntag, Link
09.2022: (US) Bloomberg, Link
10.2022: (DE) FAZ, Link
09.2022: (US) CNN, Link
03.2023: (US) Scientific American, Link
09.2023: (UK) The Guardian, Link
10.2023: (DE) Spiegel, Link
09.2023: (US) CNN, Link

Television (News/documentary)

09.2020: (DE) ZDF Doku, Link
09.2020: (CH) SRF Einstein, Link
01.2021: (CH) SRF Einstein, Link
02.2021: (DE) ZDF PUR+, Link
10.2021: (US) NBC, Today Show, Link
10.2021: (CH) SRF Tagesschau, Link
04.2022: (DE) Arte, Wilde Schweiz, Link
07.2022: (CH) SRF, 10vor10, Link
9.2022: (CH) SRF Tagesschau, Link
09.2022: Reuters, international, Link
08.2023: (DE) ZDF, Link

Radio:

08.2020: (FR) Radio France I, Link
01.2021: (CH) SRF1, Treffpunkt, Link
10.2021: (CH) RTS, Vacarme, Link
09.2022: (DE) Deutschlandfunk, Link
09.2022: SRF1, Echo der Zeit, , Link
09.2022: (UK) BCC, Newshour, Link
09.2022: (CH) RTS, CQFD, Link
11.2022: (DE) SWR2, Link
09.2023: (UK) BCC, Link
09.2023: (CH) SRF, Link