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RESEARCH EXPERIENCE

Sept 2021 Today	<p>International Postdoc in Glaciology and Oceanography (3 years) <i>Dept of Oceanographic Research (Fouo), Swedish Meteorological and Hydrological Institute (SMHI)</i></p> <p>2 years of visits at Institute of Environmental Geosciences (IGE), Uni Grenoble Alpes and at the School of Geography and Sustainable Development, Uni of St Andrews</p> <p>Postdoc associate in the International Thwaites Glacier Community (ITGC) <i>Project title: AISS-mélange – ocean-ice-mélange model to reduce uncertainties in sea level projections</i></p>	Norrköping SWEDEN Grenoble FRANCE St Andrews UK
March 2013 Jan 2018	<p>PhD in Earth Science with specialization in Physical Geography particular in Glaciology <i>Dept of Earth Science in collaboration with the department of IT, Uppsala Uni</i></p> <p>PhD associate in the SVALI project (Nordic Centre of Excellence – Nordforsk) <i>Project title: Modelling calving and sliding of Svalbard outlet glaciers – Spatio-temporal changes and interactions (defense 24 January 2018)</i></p>	Uppsala SWEDEN
Sept 2012 Dec 2012	<p>Research engineer – glacier modelling at Dept of Earth Science, Uppsala Uni Paleoglaciology modelling within the Greenland Analogue Project (GAP)</p>	Uppsala SWEDEN
June 2012	<p>Field assistant at Tarfala Research Station</p>	Tarfala SWEDEN
May 2008 Sept 2008	<p>Master thesis <i>Dept of civil and environmental engineering, Imperial College</i></p> <p><i>Project title: Modeling of the femur bone acting as a complex structure: Interaction between the bone and the muscles</i></p>	London UK

MAIN TEACHING AND SUPERVISION EXPERIENCE

2013 – 2017	<p>Glaciology and Landscape Processes –Msc course 15 ECTS GIS and Remote Sensing – Bachelor course 10 ECTS Planet Earth – Bachelor course 10 ECTS</p>	Dept of Earth Sciences, Uppsala Uni SWEDEN
2014 – 2015	<p>Supervision of two master students (30 ECTS) at the Dept of Earth Sciences</p> <ul style="list-style-type: none"> • Wainwright, D. Calving front dynamics: External forces that lead to specific sized calving events. • Westrin, P. External Conditions Effects on the SOC of the Calving Glacier Front of Tunabreen. <p>Supervision of a master student (30 ECTS) at the Dept of Information Technology</p> <ul style="list-style-type: none"> • Adinugroho, S. Calving Events Detection and Quantification from Time-lapse Images 	Uppsala Uni SWEDEN

RESEARCH EXPEDITIONS AND FIELDWORK

April, Sept 2014-2015	Time-lapse camera at the front of Tunabreen, Svalbard to estimate calving size events Building, set-up and maintenance of the camera - snow-mobile and boat	Svalbard
April 2014	Radar measurement (ice thickness) over Kronebreen, Svalbard – snow-mobile and helicopter	Svalbard

PROFESSIONAL EXPERIENCE (OUTSIDE OF RESEARCH)

Nov 2018 Dec 2020	Method and development consult engineer in hydrology <i>Swedish Meteorological and Hydrological Institute (SMHI)</i> <ul style="list-style-type: none">Hydrology modelling (energy, climate)Production settingMachine learning	Norrköping SWEDEN
March 2010 Feb 2012	Scientific and research officer specialized in environmental research <i>French Embassy in Sweden, Scientific department</i> <ul style="list-style-type: none">Promotion of French research in Sweden and stimulation of the collaborationFocus on Arctic research (report on Arctic Research in Sweden, organisation of a conference – The Arctic and the EU, may 2011 – and a summer school – Subpolar environments in Abisko, June 2010)	Stockholm SWEDEN
Oct 2008 Jan 2010	Civil engineer – design of underground structures <i>SETEC TPI, - Civil engineering design office</i>	Paris FRANCE

PARENTAL LEAVE

Feb 2018 – Oct 2018 for 1st child and Jan 2021 – Aug 2021 for 2nd child

EDUCATION

Jan 2018	Doctorate in Earth Science with specialization in Physical Geography particular in Glaciology <i>Uppsala University, department of Earth Science in collaboration with the department of IT</i>	Uppsala SWEDEN
Sept 2008	Master of Science in Civil Engineering <i>Imperial College, department of civil and environmental engineering</i>	London UK
Sept 2008	Master of Science in Civil Engineering <i>Grande Ecole ENTPE (Graduate National School of Civil and Environmental Engineering)</i>	Lyon FRANCE
Sept 2002 June 2004	Classe préparatoire MP* (Preparation for competitive exams to enter Eng. School) at Lycée Fénelon	Paris FRANCE

LANGUAGES AND COMPUTER LITERACY

French	Native language
English	Excellent level (fluent)
Swedish	Excellent level (fluent)
Computer	Office package, Python, Matlab, Unix, Fortran, FEM softwares, Hype model (hydrology)

PUBLICATIONS

Peer-reviewed original articles

- Memon, S., **Vallot, D.**, Zwinger, T., Åström, J., Neukirchen, H., Riedel, M., and Book, M.: Scientific Workflows Applied to the Coupling of a Continuum (Elmer v8.3) and a Discrete Element (HiDEM v1.0) Ice Dynamic Model, *Geosci. Model Dev. Discuss.*, doi: 10.5194/gmd-12-3001-2019, 2019.
- **Vallot, D.**, Adinugroho, S., Strand, R., How, P., Pettersson, R., Benn, D. I., and Hulton, N. R. J.: Automatic detection of calving events from time-lapse imagery at Tunabreen, Svalbard, *Geosci. Instrum. Method. Data Syst.*, doi: 10.5194/gi-8-113-2019, 2019.
- **Vallot, D.**, Åström, J., Zwinger, T., Pettersson, R., Everett, A., Benn, D. I., Luckman, A., Van Pelt, W. J. J. and Nick, F.: Effects of undercutting and sliding on calving: a global approach applied to Kronebreen, Svalbard, *The Cryosphere*, doi: 10.5194/tc-12-609-2018, 12, 609-625, 2018.
- How P., Schild K.M., Benn D.I., Noormets R., Kirchner N., Luckman A., **Vallot D.**, Hulton N.R.J. and Borstad C.: Calving controlled by melt-under-cutting: detailed calving styles revealed through time-lapse observations. *Annals of Glaciology*, doi: 10.1017/aog.2018.28, 1-12, 2018.
- Lindbäck, K., Kohler, J., Pettersson, R., Myhre, P. I., Nuth, C., Langley, K., Brandt, O., Messerli, A. and **Vallot, D.**: Subglacial topography, ice thickness, and bathymetry of Kongsfjorden, northwestern Svalbard, *Earth System Science Data*, 0, doi: 10.5194/essd-10-1769-2018, 10, 1769- 1781, 2018.
- **Vallot, D.**, Pettersson, R., Luckman, A., Benn, D. I., Zwinger, T., Van Pelt, W. J. J., Kohler, J., Schäfer, M., Claremar, B., Hulton, N. R. J. and Kohler J.: Basal dynamics of Kronebreen, a fastflowing tidewater glacier in Svalbard: global spatio-temporal response to water input, *Journal of Glaciology*, doi: 10.1017/jog.2017.69, 63(242), 1012–1024, 2017.
- Åström, J.A., **Vallot, D.**, Schäfer, M., Welty, E.Z., O Neel, S., Bartholomaeus, T.C., Liu, Y., Riikilä, T.I., Zwinger, T., Timonen, J. and Moore, J.C. Termini of calving glaciers as self-organised critical systems. *Nature Geoscience*, 7, 874–878, 2014.

Peer-reviewed conference contributions, the results of which are not included in other publications

Adinugroho, S., **Vallot, D.**, Westrin, P. and Strand, R.: Calving Events Detection and Quantification from Time-lapse Images in Tunabreen Glacier, Proceedings of 2015 International Conference on information & Communication technology and systems (ICTS), IEEE, Surabaya, September 16 th , 2015.

INVITED PRESENTATIONS

C44B-02 – First-principles Simulations and the Criticality of Calving Glaciers. Åström, J.A., Vallot, D., Schäfer, M., Welty, E.Z., O’Neel, S., Bartholomaeus, T.C., and others. American Geophysical Union (AGU) meeting. San Francisco (USA), December 2014.

RESEARCH GRANTS AWARDED IN COMPETITION

2021	International Postdoc grant from Swedish Research Council (Vetenskapsrådet)	31 500 €
2015	Liljewalch travel scholarship for conference, Sweden Travel to the International Symposium on Hydrology of Glaciers and Ice Sheets, Hornafjörður, Iceland	1 500 €
2015	Rector travel grant from Wallenberg scholarship, Sweden Time-lapse camera in front of Tunabreen, a calving glacier in Svalbard	2 200 €
2015	Stiftelsen Ymer-80, Sweden Radar mapping of the bed of the front of Tunabreen Svalbard	1 400 €
2015	Svenska Sällskapet för Antropologi och Geografi (SSAG) Andréefondon, Sweden Radar mapping of the bed of the front of Kronebreen, Svalbard	1 500 €
2014	Forskningsrådet Svalbard Science Forum – Arctic Field Grant, Norway Radar mapping of the bed of tributary glaciers of Kronebreen, Svalbard, RIS ID 6660	8 000 €
2014	Stiftelse Ymer-80, Sweden Set-up of a time-lapse camera in front of Tunabreen, a calving glacier in Svalbard	3 000 €
2014	Svenska Sällskapet för Antropologi och Geografi (SSAG) Andréefondon, Sweden Set-up of a time-lapse camera in front of Tunabreen, a calving glacier in Svalbard	1 600 €
2013	Magrit Althins scholarship, Sweden Travel grant: Glaciological modeling using the finite element software Elmer/ice	1 000 €