

Andrea L. Popp

Curriculum Vitae (March 2022)

Hydrology Research
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Education

- 09/2015–10/2019 **Ph.D.**, *ETH Zurich (CH)*.
- 10/2012–08/2015 **M.Sc. Hydrology**, *University of Freiburg (DE)* with courses taken at *FU Berlin* and *University of Basel*.
- 10/2009–09/2012 **B.Sc. Environmental Natural Sciences, minor in Hydrology**, *University of Freiburg (DE)* with courses taken at *University of Konstanz*.

Professional Appointments & Research Experience

- since 01/2022 **Project manager and researcher**, *Swedish Meteorological and Hydrological Institute (SMHI)*, Hydrology Research, Norrköping (SE).
- 01/2020–06/2022 **Postdoctoral fellow (25% teaching)**, *University of Oslo*, Department of Geosciences, Oslo (NO).
- 01/2021–06/2021 **Visiting scientist**, *Stockholm University*, Department of Physical Geography, Hydrology, Water Resources and Permafrost Research Unit, Stockholm (SE).
- 09/2015–12/2019 **Employee (doctoral student)**, *Eawag (Swiss Federal Institute of Aquatic Science and Technology)*, Department of Water Resources and Drinking Water, environmental isotopes group, Dübendorf (CH).
- 09/2015–10/2019 **Doctoral student**, *ETH*, Department of Environmental Systems Science, Zurich (CH).
- 06/2019–07/2019 **Visiting scientist**, *University of Neuchâtel*, Centre d'Hydrogéologie et de Géothermie, Neuchâtel (CH).
- 07/2018–08/2018 **Visiting scientist**, *University of British Columbia*, Department of Earth, Ocean and Atmospheric Sciences, Vancouver (CA).
- 07/2018–08/2018 **Visiting scientist**, *Université Laval*, Department of Geology and Geological Engineering, Quebec (CA).
- 05/2016–07/2016 **Visiting scientist**, *IGB (Leibniz-Institute of Freshwater Ecology and Inland Fisheries)*, Ecohydrology department, Berlin (DE).
- 07/2015–08/2015 **Visiting scholar**, *University of Victoria*, Civil Engineering Department, groundwater and sustainability group, Victoria (CA).
- 10/2014–05/2015 **Visiting scholar**, *Eawag*, Department of Water Resources and Drinking Water, hydrogeology group, Dübendorf (CH).
- 11/2012–12/2014 **Research assistant**, *University of Freiburg*, Chair of Hydrology, Freiburg (DE).
- 07/2012–09/2012 **Intern**, *Agency for the Environment and Energy*, groundwater department, Basel (CH).
- 11/2011–06/2012 **Student assistant**, *University of Freiburg*, Chair of Hydrology, Freiburg (DE).

06/2011–10/2011 **Student assistant**, University of Freiburg, Chair of Physical Geography, Freiburg (DE).

Teaching & Supervision

since 06/2020 **Lecturer at University of Oslo**, Hydrological Modeling (GEO4320), Hydrogeology (GEO4190), Field Methods in Hydrogeology (GEO4360) and Environmental Geology (GEO3100).

09/2016–10/2017 **Group leader & facilitator**, ETH Week “Challenging Water” and “Manufacturing the Future”.

09/2015–02/2017 **Teaching assistant at ETH Zurich**, experimental physics course for B.Sc. Environmental Sciences students.

Peer-Reviewed Journal Articles

2022 Hall, C.A., Saia, S.M., **Popp, A.L.**, Dogulu, N., Schymanski, S., Drost, N., van Emmerik T. Hut, R..

A Hydrologist’s Guide to Open Science.

Hydrology and Earth System Sciences, doi.org/10.5194/hess-2021-392.

2021 **Popp, A.L.***, Manning, C.*, Knapp, J.L.A*.

Rapid advances in mobile mass spectrometry enhance tracer hydrology and water management.

Water Resources Research, doi.org/10.1029/2021WR029890.

Popp, A.L., Pardo-Álvarez, Á., Schilling, O., Musy, S., Peel, M., Brunner, P., Purtschert, R., Hunkeler, D., Kipfer R.

A framework for untangling transient groundwater mixing and travel times.

Water Resources Research, doi.org/10.1029/2020WR028362, (selected as Editor’s **Research Spotlight**).

Biswakarma, J., Rushworth, D., Srivastava, G., Singh, G., Kang, K., Das, S., Anantharaman, S.B., Aeppli, M., **Popp, A.L.**, Bhuyan, D.J.

Organizational Level Responses to the COVID-19 Outbreak: Challenges, Strategies and Framework for Academic Institutes.

Frontiers Communication, doi.org/10.3389/fcomm.2021.573585.

Moeck, C., **Popp, A.L.**, Brennwald, M.S., Kipfer R., Schirmer, M.

Combined method of $^3\text{H}/^3\text{He}$ apparent age and on-site helium analysis to identify groundwater flow processes and transport of perchloroethylene (PCE) in an urban area.

Journal of Contaminant Hydrology, doi.org/10.1016/j.jconhyd.2021.103773.

2020 **Popp, A.L.**, Manning, C., Brennwald, S., Kipfer R.

A new in-situ method for tracing denitrification in riparian groundwater.

Environmental Science & Technology, 54, 3, 1562–1572, doi.org/10.1021/acs.est.9b05393.

Popp, A.L., Hall, C. and Yilmaz, Y.

How to combat bullying and discrimination in the geosciences.

Eos, 101, doi.org/10.1029/2020E0151914.

- 2019 **Popp, A.L.**, Scheidegger, A., Moeck, C., Brennwald, S., Kipfer R.
Integrating Bayesian groundwater mixing modeling with on-site helium analysis to identify unknown water sources.
Water Resources Research, 55, 12, 10602–10615, doi.org/10.1029/2019WR025677.
- Popp, A.L.***, Lutz, S.R.*, Kathami, S., van Emmerik, T., Knoben W.
A global survey on the perceptions and impacts of gender inequality in the Earth and space sciences.
Earth and Space Science, 6, 1460–1468, doi.org/10.1029/2019EA000706 (among the journal's **top 10% most downloaded** papers in 2019).
- Lewandowski, J., Arnon, S., Banks, E., Batelaan, O., Betterle, A., Broecker, T., Coll, C., Drummond, J.D., Gaona Garcia, J, Galloway, J., Gomez-Velez, J., Grabowski, R.C., Herzog, S.P., Hinkelmann, R., Höhne, A., Hollender, J., Horn, M.A., Jaeger, A., Krause, S., Löchner Prats, A., Magliozzi, C., Meinikmann, K., Mojarrad, B.B., Mueller, B.M., Peralta-Maraver, I., **Popp, A.L.**, Posselt, M., Putschew, A., Radke, M., Raza, M., Riml, J., Robertson, A., Rutere, C., Schaper, J.L., Schirmer, M., Schulz, H., Shanafeld, M., Singh, T., Ward, A.S., Wolke, P., Wörman, A. and Wu, L.
Is the hyporheic zone relevant beyond the scientific community?
Water, 11(11), 2230, doi.org/10.3390/w11112230.
- 2018 van Emmerik, T., **Popp, A.**, Solcerova, A., Müller, H., Hut, R.
Reporting negative results to stimulate experimental hydrology.
Hydrological Sciences Journal, 1–4, doi.org/10.1080/02626667.2018.1493203.
- Lutz, S.R., **Popp, A.**, van Emmerik, T., Gleeson, T., Kalaugher, L., Möbius, K., Mudde, T., Walton, B., Hut, R., Savenije, H., Slater, L.J., Solcerova, A., Stoof, C.R., Zink, M.
Science in today's media landscape—challenges and lessons from hydrologists and journalists.
Hydrology and Earth System Sciences, 22(7), 3589–3599, doi.org/10.5194/hess-22-3589-2018.
- Gleeson, T., Manning, A. H., **Popp, A.**, Zane, M., Clark, J. F.
The suitability of using dissolved gases to determine groundwater discharge to high gradient streams.
Journal of Hydrology, 557, 561-572, doi.org/10.1016/j.jhydro.2017.12.022.
- 2017 Moeck, C., Radny, D., **Popp, A.**, Brennwald, M., Stoll, S., Auckenthaler, A., Berg, M., Schirmer, M.
Characterization of a managed aquifer recharge system using multiple tracers.
Science of the Total Environment, 609, 701-714, doi.org/10.1016/j.scitotenv.2017.07.211.

***shared first-authorship.**

Peer-Reviewed Technical Reports

- 2021 Ladd, B., Van De Ven, C.J.C., Chao, J., Soares, J., Cary, T., Finke, N., Manning, C., **Popp, A.L.**, Chopra, C., Cahill, A.G., Mayer, K.U., Black, A., Lauer, R., van Geloven, C., Welch, L., Crowe, S., Mayer, B., Beckie, R.D..
Assessment of Fugitive Natural Gas on Near-Surface Groundwater Quality.
Geoscience BC Final Report, (open access link).

Van De Ven, C.J.C., Cahill, A.G., Ladd, B., Chao, J., Soares, J., Cary, T., Finke, N., Manning, C., **Popp, A.L.**, Chopra, C., Mayer, K.U., Black, A., Lauer, R., van Geloven, C., Welch, L., Crowe, S., Mayer, B., Beckie, R.D.
A confined aquifer controlled natural gas release experiment in NE BC, Canada: Activity report 2019-2020.
Geoscience BC Summary of Activities 2019 Geoscience BC, (open access link).
- 2020 Cahill, A.G., Ladd, B., Chao, J., Soares, J., Cary, T., Finke, N., Manning, C., **Popp, A.L.**, Chopra, C., Mayer, K.U., Black, A., Lauer, R., van Geloven, C., Welch, L., Crowe, S., Mayber, B., Beckie, R.D.
Controlled Natural Gas Release Experiment in a Confined Aquifer, Northeastern British Columbia: Activity Report 2018–2019.
Geoscience BC Summary of Activities 2018 Geoscience BC, (open access link).
- 2011 Zingraff-Hamed, A. and **Popp, A.**
Nicht wirklich nachhaltig—Stadtmitte am Fluss.
Garten + Landschaft. 12, 46–47.

Conference Proceedings (selected, 42 in total)

- 2020 **Popp, A.L.**, Pardo-Álvarez, Á., Schilling, O., Musy, S., Peel, M., Purtschert, R., Hunkeler, D., Kipfer R., Brunner, P.
A framework for untangling transient groundwater mixing and travel times.
AGU Fall Meeting (online).
- 2019 **Popp, A.**, Brennwald, M. and Kipfer, R.
A new method for tracing denitrification and CO₂ production in riparian groundwater.
EGU General Assembly (Vienna, AT).
- 2018 **Popp, A.** and Kipfer, R.
Physical and biogeochemical response of groundwater to flood events.
European Hyporheic Forum (London, UK).
- 2017 **Popp, A.**, Marçais, J., Moeck, C., Brennwald, M., and Kipfer, R.
Residence time distributions of artificially infiltrated groundwater used for drinking water production.
AGU Fall Meeting (New Orleans, USA).
- 2016 **Popp, A.**, Brennwald, M., and Kipfer, R.
Residence times of transient riverbank exchanges traced by dissolved gases.
AGU Fall Meeting (San Francisco, USA).

- 2015 **Popp, A.**, Moeck, C., Radny, D., Borer, P., Affolter A., Epting, J., Huggenberger, P., Auckenthaler, A., Schirmer, M.
Prediction of Artificial Groundwater Recharge in an Urban Area.
EGU General Assembly (Vienna, AT).

Grants & Fellowships

- 2021 EU Cost Action (WATSON) Virtual Mobility Grant (project lead) for collaboration on a review paper on tracer-aided water source partitioning within the Critical Zone (EUR 1 500)
- 2020 Kristine Bonnevie travel stipend for a research visit to Stockholm University (NOK 151 500).
- 2020 SIOS (Svalbard Integrated Arctic Earth Observing System) grant (project contributor) for research on glacial lake outburst floods (NOK 130 000).
- 2020 Norwegian Research Council grant (PI) for fieldwork in Svalbard to study Arctic water resources (NOK 58 000).
- 2020 Peder-Sather Grant (PI) for research on the hydrologic response of climate-change induced snow cover changes in mountainous areas, in collaboration with Prof. Laurel Larsen (UC Berkeley, US; USD 20 000).
- 2020 Garpen stipend (PI) for fieldwork at the Finse Alpine Research Center in Norway (NOK 15 000).
- 2017 Grant to participate in UNLEASH—a global innovation lab addressing the United Nations Sustainable Development Goals.
- 2015 German Academic Exchange Service (DAAD) scholarship for a 3-months research visit to the University of Victoria (CA).
- 2014 German Academic Exchange Service (DAAD) scholarship for a 6-months research visit to Eawag (CH).
- 2014 Travel grant from the Förderverein Hydrologie e.V. for attending the trinational EUCOR summerschool “Energy transition in the upper Rhine valley”.
- 2014 Travel grant from Swiss Re to participate in the Swiss Re Academy Challenge Workshop, Zurich (CH).
- 2011 Travel grant from the Förderverein Hydrologie e.V. for attending the German–French summerschool “H2O: Wasser, Leben, Erleben—eau, source, ressource”.

Honors & Awards

- 2020 Selected to participate in the “Mentoring programme for female postdocs” of the University of Oslo, NO.
- 2020 Recognition from *Eos* for article addressing cultural change within the geoscience community (USD 500).
- 2019 Recognition for outstanding social commitment from Eawag (CH; CHF 1 000).
- 2017 Best Poster Award at the HydroEco conference, Birmingham (UK; GBP 150).

Academic Service & Commitment

- Commitment Elected member of the **EGU Equality, Diversity and Inclusion working group** (since 2020), WMO Hydrology Expert (since 2020), elected chair and board member of the **Young Hydrologic Society** (YHS) (2016–2020; chair from 2018–2019); Eawag Student Committee (2017–2019); active member of Engineers Without Borders Switzerland (2016–2017); founding member of a Rotaract Club (2005–2013)
- IPCC Referee Expert Reviewer of the Sixth Assessment Report, Working Group I, Chapter 8: Water cycle changes
- Journal Referee Water Resources Research, Geophysical Research Letters, Hydrology and Earth System Sciences, Hydrological Sciences Journal, Hydrogeology Journal, Journal of Geoscience Education, Review Editor for Frontiers Water
- Conferences & Seminars Organization of conference sessions and short courses at EGU General Assemblies (2017–2021), and the European Hyporheic Forum (10 in total); organization of seminars and workshops on diversity and inclusion in the geosciences at University of Oslo (October 2020; May 2021; March 2022); organization of a two-day conference at Eawag (CH; April 2019)
- Panel invitations Panelist at Lancaster University workshop “Diversifying academia: approaches that work” (March 2022); panelist at a gender equality seminar at the Natural History Museum Oslo (June 2021); panelist for the event “Moving Beyond the Standard: Transdisciplinary Virtual Event for Early-Career Scientists” at AGU2020 (December 2020)
- Memberships AGU (since 2015), EGU (since 2014)

Leadership Positions & International Projects

- Research Networks EU COST Action WATSON “WATER isotopeS in the critical zONE: from groundwater recharge to plant transpiration” (vice-lead of Working Group 1 and Management Committee, since 2020), lead of groundwater related research in LATICE (since 2020), Groundwater Drought Initiative (since 2020), The Energy and Environment Research Initiative (2018–2019), EU Horizon 2020 ITN HypoTRAIN (2015–2019), Regionale Wasserversorgung Basel-Landschaft 21 (2014–2015), CAOS (2012–2014), EnableWCM (2011–2012), Tambora (2011)

Dissemination & Media Coverage

- Blog Posts Stein, L., Saia, S., Hall, C., **Popp, A.**, Beria, H., Khatami, S., Dogulu, N., Müller-Thomy, H. (2020).
The Young Hydrologic Society Stands Against Racism.
EGU Hydrology blog.
- Popp, A.** (2017).
10 guidelines for an awesome poster.
Streams of Thought blog, *Young Hydrologic Society*, doi:10.5281/zenodo.1048258; with +10 000 views most accessed post of this blog.
- Popp, A.** (2017).
Hallway Conversation with Stefan Uhlenbrook.
Young Hydrologic Society.

Interviews and Media Coverage LeTemps (2021).
Des gaz pour suivre l'eau.
Media coverage of Popp et al., 2021, *Water Resources Research*.

swissinfo (2021).
Neuer Ansatz zur Grundwasserkontrolle—Gut für trockene Zeiten.
Media coverage of Popp et al., 2021, *Water Resources Research*.

Eawag (2021).
Die Wege des Emmentaler Grundwassers mit Edelgasen erschnüffelt.
Interview and media coverage of Popp et al., 2021, *Water Resources Research*.

Higgs (2019).
Aus Zeitmangel lieber unter den Teppich kehren.
Interview and media coverage of van Emmerik et al., 2018, *Hydrological Sciences Journal*.

Eawag (2019).
Breaking away from gender inequality absolutely essential.
Interview on Popp et al., 2019, *Earth and Space Science*.