

SASCHA MÜLLER (PHD.)

Institute for Geosciences and Natural Resources

University of Copenhagen
Øster Voldgade 10, 2200 Copenhagen

e-mail: samu@ign.ku.dk

tel: +45 35334599

ORCID: 0000-0002-5554-967X



RESEARCH INTERESTS

Tracer hydrology, stable isotope hydrology, stable isotopes in precipitation, surface water & groundwater interaction, hydro-geochemistry, saltwater-freshwater dynamics, field hydrology, small & reach scale hydrological modelling

WORK EXPERIENCE

- 2017-present **Post –doctorate researcher**
Institute for Geosciences and Natural Resources, University of Copenhagen
- 2017 (3 month) **Freelance Consultant**
Bornholm's Regionskommune – Hydrogeological risk assessment for drinking water protection
- 2011-2013 **Student assistant**
Danish Geodata Agency – Hydrographic Office
- 2012-2013 **Field work assistant**
COWI (Environmental Consultant Company Denmark)
- 2011 **Field assistant in Greenland, Disco Bay**
GEUS (Geological Survey Denmark)
- 2008 **Teaching assistant**
Department of Physical Geography, University of Leipzig, Germany

EDUCATION

- 2017 (02/07) **PhD**, Hydrogeology, IGN University of Copenhagen, Denmark
Thesis: Stable Oxygen-18 and Deuterium Isotopes. Applications in a maritime temperate lowland environment
- 2013 **MSc.** Geography & Geoinformatic, IGN University of Copenhagen, Denmark, Thesis: Hydrogeology of the groundwater-lake interface at Lake Væng, Denmark. Implications for groundwater discharge and Phosphorus loading.
- 2009 **BSc.** Geography, University of Leipzig, Germany.

FUNDING/ AWARDS

- Villum Experiment Grant
Plastic in Groundwater
primary applicant [1.997.676 DKK] 2018-2021
- Danish water forum: Best contribution at the DWF Annual Meeting [5.000 DKK] 2016

External research stays

2015 (4month)	Helmholtz Center for Health & Environment, Groundwater Ecology, München, GER,
2011 (3month)	United States Geological Survey (USGS) Denver, Colorado, USA

Teaching

2016/2017	Water Resources I (Teaching Assistant-University of Copenhagen)
2014	Hydrogeological Field course (Teaching Assistant-University of Copenhagen)
2013	Introduction to Hydrogeology (Teaching Assistant-University of Copenhagen)
2008/2009	Climate, Water, Vegetation (Teaching Assistant- University of Leipzig)

CURRENT RESEARCH / WORK IN PROGRESS

The effect of sediment thermal conductivity on vertical groundwater flux estimates. Sebok, E. & Müller, S., in Review, HESS.
<https://doi.org/10.5194/hess-2016-210>

Mean Transit time, Storage and origin of lowland stream water. Müller, S., Jessen, S., Engesgaard, P. Manuscript in preparation

*Groundwater-controlled phosphorus recycling from sandy aquifer into lake. Kazmierczak, J., Postma, D., Müller, S., Jessen, S., Nilsson, B., Czekaj, J., Engesgaard, P. in Review *Limnology and Oceanography**

PUBLICATIONS

1. **Müller, S., Jessen, C. Duque, E. Sebok, B. Neilson, P. Engesgaard (2017):** Assessing seasonal flow dynamics at a lagoon saltwater- freshwater interface using a dual tracer approach. *Journal of Hydrology-Regional Studies.* <https://doi.org/10.1016/j.ejrh.2018.03.005>
2. **Müller, S., Stumpp, C., Sørensen, J.H., Jessen, S. (2017):** Spatiotemporal variation of stable isotopic composition in precipitation: Post-condensational effects in a humid area. *Hydrological Processes.* 2017; 31:3146-3159. <https://doi.org/10.1002/hyp.11186>
3. Jessen, S., Postma, D., Thorling, L., **Müller, S.**, Leskela, J., & Engesgaard, P. (2017). Decadal variations in groundwater quality: A legacy from nitrate leaching and denitrification by pyrite in a sandy aquifer. *Water Resources Research*, 53(1), 184-198.
4. Kazmierczak, J., **Müller, S.**, Nilsson, B., Postma, D., Czekaj, J., Sebok, E. & Engesgaard, P. (2016). Groundwater flow and heterogeneous discharge into a seepage lake: Combined use of physical methods and hydrochemical tracers. *Water Resources Research*, 52(11), 9109-9130.
5. Duque, C., **Müller, S.**, Sebok, E., Haider, K., Engesgaard, P. (2016): Estimating groundwater discharge to surface waters using heat as a tracer in low flux environments: The role of thermal conductivity, *Hydrol. Process.*, doi: 10.1002/hyp.10568