

Looking for a PhD position?

CatchNet is looking for several **fully-funded PhD candidates** for projects involving site-specific numerical modeling of **cold region hydrology, hydrogeology and biogeochemical cycling**



Within the Catchment Transport and Cryo Hydrology Network (CatchNet) we offer three to four PhD positions focusing on modeling of surface water and groundwater interactions and biogeochemical transport in permafrost environments. CatchNet aims at advancing our understanding of hydrological and biogeochemical transport processes for a range of cold-climate conditions in the context of long-term, deep geological storage of spent nuclear fuel. The research is carried out in collaboration with the University of Copenhagen, McGill University, Dalhousie University, Aalto University and the nuclear waste management organizations in Sweden (SKB), Canada (NWMO), Finland (Posiva), The Netherlands (COVRA), and Germany (GRS); there is also UK (RWM) interest. The positions offer a strong connection to industry through regular meetings and a mentorship programme with the CatchNet industrial partners. The PhD projects will focus on:

1. Subglacial and periglacial hydrogeological connections at the landscape scale. The research will focus on conceptual and numerical modeling of groundwater dynamics and connections to the surface water system, based on extensive observational data from sites in Greenland. The position is offered at the University of Copenhagen.
2. Hydrogeology during permafrost transitional periods. The research will focus on groundwater – surface water interactions over a range of permafrost conditions and transitions from no permafrost to permafrost conditions. Catchment-scale modeling will be linked to a range of sites in Sweden, Canada, and Greenland. The position is offered jointly at McGill University and Dalhousie University.
3. Biogeochemical cycling in permafrost environments. This research will focus on coupling numerical hydrological modeling to biogeochemical cycling and evapotranspiration processes in permafrost environments. One or two positions will be offered in Finland and/or Canada.

We are looking for candidates with a background in geosciences or engineering and with an interest in numerical modeling, programming, and hydrology/hydrogeology or biogeochemistry. Candidates are expected to work collaboratively across disciplinary, national and academic-industrial boundaries.

The envisioned starting date for the positions is September 2019.

Please note that this is only a call for interest for the above listed positions. Please contact Ylva Sjöberg (ys@ign.ku.dk) for further information about the positions and how to apply for each of the positions. Please write “CatchNet PhD” as the subject line in your email. For questions about the mentorship programme or the industrial partners, please contact Emma Johansson, SKB (emma.johansson@skb.se).