

I spent the spring of 2019 on sabbatical at the Large Lakes Observatory (LLO) in the Duluth, MN, with partial support from FILAMO. LLO is devoted to studying the largest lakes on Earth, including the Laurentian Great Lakes in USA/Canada. The institute is located on the shores of Lake Superior, in an old school building that is rich in mahogany interiors and general academic atmosphere. My host was Professor Robert Sterner, who is the director of the institute and also a friend and scientific colleague for more than 20 years. The Institute has 12 permanent faculty, covering lake biology, biogeochemistry, paleoecology, physics, etc. I regularly attended lab meetings and institute seminars (“chalk talks”) on my stay there, but most of all I enjoyed having time to focus on a single topic for several days at a time, which close to impossible in my normal workdays back at the University of Oslo, department of Biosciences.

One of my goals was to improve my skills and workflows in data analysis. The starting point for this was to get familiar with modern tools for reproducible science, such as [R Markdown](#) for documenting analyses, [Overleaf](#) for collaborative Latex documents, [GitHub](#) for open and collaborative coding, and [Zenodo](#) for archiving publication workflows. The result of this effort (after some setbacks and resubmissions) was my first publication with proper open science supplementary information ([Andersen et al. 2020](#)).

My statistical background is entirely likelihood-based even though I have always been curious about Bayesian statistics. I therefore spent time reading up on general theory and teaching myself how to use Bayesian computation tools like [Stan](#), as well as Bayesian species distribution ([HMSC](#)) and mixture modelling ([BCE](#)). These explorations eventually lead me to the [Ecological Forecasting Initiative](#) (EFI), which is a grass root movement devoted to using Bayesian approaches for specifying and propagating uncertainties in ecological models. After making contact with Professor Michael Dietze, the author of the book [Ecological Forecasting](#), I started investigating if it would be possible to have a FILAMO summer school based on a course that Dietze and his group has been running in Boston. This effort finally materialized in the autumn of 2019 when we arranged a [FILAMO workshop](#) in Drøbak, Norway, with 20 PhD and post.doc candidates from eight different countries. I also wrote up a so-called “prioritized research area” proposal on cross-disciplinary forecasting for a strategic recruitment process at our department, which received better-than-average evaluation but has so far resulted in no new recruitment positions.

My original plan was to participate in teaching [studyH2O](#), which is a module-based, cross-disciplinary course in inland water science at UMN Duluth. Unfortunately, they had to cancel this course in the spring term 2019 due to lack of enrolment. As an alternative, I engaged myself online activities under [Project EDDIE](#), whose goal is to develop flexible classroom teaching modules using large, publicly available datasets to engage students in STEM and improve their quantitative reasoning. I submitted a module for the EDDIE system based on a computing lab in R for analysis water chemistry in 3500 Nordic lakes. I also attended a 4-day workshop on [Teaching quantitative reasoning with data](#), Carlton College, MN, which gave many new ideas for using large, public datasets in my teaching.

The American Statistician released a special issue [Moving to a world beyond "p<0.05"](#) in the spring 2019, which was of special interest for me as someone who has been teaching statistics to biologists for more than 20 years. I held a seminar at LLO on the topic, and also attended the [USCOTS conference 2019](#) at State College, PA, where the editor of the Am. Stat. special issue, Ron Wasserstein, was one of the keynote speakers. Inspired by this conference, I used part of my sabbatical for rewriting my statistics

teaching so that it made less emphasis on null hypothesis significance tests, and more on modelling data and on making effect sizes inferences based on estimated parameters and their uncertainties.