Contribution ID: **24**   Type: **not specified**

Stability of Bayesian Optimal Experimental Design in Inverse Problems

Wednesday, 5 July 2023 14:00 (50 minutes)

We study the stability properties of the expected utility function in Bayesian optimal experimental design. We provide a framework for this problem in the case of expected information gain criterion in an infinite-dimensional setting, where we obtain the convergence of the expected utility with respect to perturbations. To make the problem more concrete we demonstrate that non-linear Bayesian inverse problems with Gaussian likelihood satisfy necessary assumptions in our theory. Some numerical simulations with different examples are explored.

Primary author: HELIN, Tapio (LUT University, Finland)

Presenter: HELIN, Tapio (LUT University, Finland)