ID de Contribution: **11** Type: **Non spécifié**

Short talk: Convergence rates of deep Gaussian processes (Chair: Olivier Roustant)

mardi 8 juillet 2025 16:50 (20 minutes)

Gaussian processes have proven to be powerful and flexible tools for various statistical inference and machine learning tasks. However, they can be limited when the underlying datasets exhibit non-stationary or anisotropic properties. Deep Gaussian processes extend the capabilities of standard Gaussian processes by introducing a hierarchical structure, where the outputs of one Gaussian process serve as inputs to another. This hierarchical approach enables deep Gaussian processes to model complex, non-stationary behaviours that standard Gaussian processes may struggle to capture. In this talk, we introduce deep Gaussian processes and explore their use as priors in interpolation and regression tasks. We present results on the convergence rates of deep Gaussian processes in terms of the number of known data points.

Orateur: OSBORNE, Conor (University of Edinburgh)