

## **SOME THEORY FOR DEEP GAUSSIAN PROCESSES**

ARETHA TECKENTRUP

Deep Gaussian processes have proved remarkably successful as a tool for various statistical inference and machine learning tasks. This success relates in part to the flexibility of these processes and their ability to capture complex, non-stationary behaviours. In this talk, we will introduce the general framework of deep Gaussian processes, in which many examples can be constructed, and demonstrate their superiority in regression and interpolation tasks. We will further discuss recent theoretical results which give crucial insight into the behaviour of the methodology as the number of training points increases.