

**Speaker: Ludovic STEPHAN**

**Title: Learning low-dimensional functions with SGD, efficiently**

**Abstract:** We study the learning of low-dimensional functions, i.e. functions that only depend on a few unknown relevant directions in the data. A well-known barrier for one-pass SGD is the so-called information exponent of such functions, which conditions both the sample and time complexity needed for SGD to learn. In this talk, I will explain how to go beyond these barriers with SGD-based algorithms, by either acting on the batch size or using midpoint-based methods.