Lorenzo ROSASCO (University Of Genova, Italy)

**Title: Learning functions, operators and dynamical systems with kernels**

Abstract:
Supervised machine learning is concerned with the problem of estimating a function of interest from a random set of input/output pairs. While classically real-valued functions are considered, there is a growing interest in estimating more complex maps such as linear and nonlinear operators.

In this talk, I will describe how some of these questions can be tackled using kernel methods. I will show how classical results for scalar-valued functions seamlessly extend to operators. Then, I will describe how this approach can be used to learn dynamical systems by estimating the corresponding Koopman operator.