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# Seminar

## SURVIVAL 2.0: INCLUDING DYNAMIC COVARIATES IN A TIME TO EVENT FRAMEWORK VIA FUNCTIONAL DATA ANALYSIS

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**Room Benvenuti | Campus S. Caterina**

**Abstract:** It is more and more often the case, in clinical research, that the interest lies in characterizing the association between time-to-event data and dynamic (or time-varying) covariates. This task is not new to the literature, but only in the last years Functional Data Analysis (FDA) came into play for properly representing time-varying covariates, so to plug them into suitable statistical models and obtain more accurate predictions. In this talk, we will exploit the joint use of FDA within time-to-event framework as a tool for risk stratification and personalized prediction, motivated by a real problem where the overall survival of patients affected by chronic conditions is considered. The aim of the study is to predict survival, properly quantifying how processes like drug assumptions, re-hospitalizations and longitudinal biomarkers act on it.

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