



Mathematisches Kolloquium

Light cones and supervised learning prediction tasks

Sprecher: PD Dr. Imma Curato, Universität Ulm

10.12.2021 | 14:30 Uhr | Raum N24/226

Analyzing spatio-temporal data sets is essential in various domains, including environmental monitoring, climate, economics, and medicine. However, space and time introduce a rich diversity in the possible data sets to use in prediction tasks. We analyze in this talk the special case of videos which can be considered spatio-temporal data sets because they consist of sequences of spatial maps (frames) observed over time.

The first challenge we need to face is finding the right way to reproduce the serial correlation typically observed between different pixels in distinct time points. We propose to use light cones and mixed moving averages fields to solve this bottleneck. We then explain how using light cones (to represent the data) influences the dependence structure of a mixed moving average field. This analysis will enable us to define inference methodologies and regression prediction tasks for videos data.

Der Vortrag ist für ein breites Publikum geeignet