Seminar/Talk

Pattern recognition and visualization in unevenly samples time-series

Christian Pieringer
Pontificia Universidad Catolica, Chile

Host: Maximilian Jösch

Machine learning has been a powerful tool for the automatic classification and mining large amount of data. However, every data domain has challenges in the way that algorithms can handle it to deliver useful insights. Unevenly sampled time series is one kind data that presents challenges related to the irregular sampling, sparsity and noise. These challenges are common among a wide range of research areas, such as the particular case of astronomical light curves discussed in this talk.Some of the major tasks in the analysis of these astronomical data sets are feature engineering, classification and recently, visualization of relevant patterns. From the feature engineering perspective, modern methods allow us to discriminate possibly relevant patterns among millions of time series directly from the data in an unsupervised manner. Moreover, the visualization of these selected patterns is further designed to aid experts in the identification and understanding of the complex dynamics in these astronomical time series. This talk explains the application of dictionary-based methods on coding relevant parts of unevenly sampled time series and the use of this approach on visualization.

Monday, October 9, 2017 02:00pm - 03:00pm
Mondi Seminar Room 1, Central Building

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