

## **Analyzing High Dimensional On-Line Monitoring Data**

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### **Abstract**

In critical care an abundance of data is generated during the process of care: this data can be stored in real time in clinical information systems which comprise databases with more than 2000 separate patient related variables. Modeling and analysis of the underlying process is a central task that needs to be solved to develop clinical decision support for intensive care medicine. Important requirements for these methods are the ability to handle the data online, the detection of change points, the necessity for the monitoring of the individual patient, good interpretability of results, clinical applications with fast algorithms, as well as the ability to handle multivariate time series.