

A Less Traditional Approach to Biomedical Signal Processing for Sepsis Prediction

V. Iapăscuță

Department of Anesthesia and Intensive Care, N. Testemițanu State University of Medicine and Pharmacy, Chișinău, Republic of Moldova

Most of the data generated by monitors in a clinical setting represent time series data which can be visualized and subsequently used for decision making. This usually is the simplest part. A more challenging aspect is using this data for more complex task like machine learning with the same goal – computer assisted decisions. Within this challenge raw biomedical signal data need to be preprocessed before being passed to the machine learning algorithm. This can be done by a multitude of methods. A number of such methods comes from the field of Algorithmic Complexity and although of a promising nature, these particular methods are poorly explored yet. The current research presents an example of applying the Block Decomposition Method to data routinely generated by patients in a modern Intensive Care Unit. The final goal of a larger research, the actual research being part of, is building a system for early sepsis prediction.