

The aim of this work was looking for single dimensional distributions of fractals in real world time series and use them to compress these time series. Usability of these principles for both lossless and lossy compression was examined. Base on the problem analysis was as first designed and implemented the basic compression algorithm. This was progressively extended with simple heuristics for better performance and also other techniques, which should have reduced its deficiencies. As the result were created two more extended compression algorithms and one algorithm with different data processing. Properties of these algorithms, output sizes and quality of decompressed data were compared on several input data and algorithms were also compared with existing compress algorithms and methods for storing time series data.