

DPS ALGORITHM. APPLICATION TO TIME SERIES AND
TWO-DIMENSIONAL RELIEFS.

Sh. R. Bogoutdinov¹, S. M. Agayan¹, S. D. Mikhalevskiy¹

¹ Geophysical Center of the Russian Academy of Sciences (GC RAS, Russia)

shm@gcras.ru

Two years ago a new algorithm for objective classification, the DPS (Discrete Perfect Sets), was developed at the Geophysical Center of the Russian Academy of Sciences. This algorithm is a part of an original approach to the analysis of discrete data – the discrete mathematical analysis. Soon after the development DPS was successfully applied for the recognition of areas prone to strong earthquakes (California, Caucasus) and the analysis of gravity data (Molucca Sea).

In this paper we propose modifications of the DPS algorithm, allowing identification of elevations on one-dimensional and two-dimensional reliefs. As a result, we obtain a new approach to the modeling of the interpreter logic i.e. to the anomaly detection on one-dimensional and two-dimensional geophysical time series.