

Porovnanie interpolačných metód založených na radiálnych bázičných funkciách

Comparison of interpolation methods based on radial basis function

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Abstract:

This paper evaluates various interpolation methods based on radial basis functions. The aim of this paper is the modelling of spatial and temporal scaling exponent of rainfall over a range of scales. We will compare two most used methods: Thin Plate Spline method and Hardy's multi quadric function. Moreover, the second method will be evaluated for various parameters. These interpolation methods are employed, and examples of the results are given. Both modelling approaches are used to predict the rainfall intensity over all places in Slovakia. These model approaches give acceptable forecasts. Their accuracy will be evaluated by bootstrapping statistical approach. The models can be used to predict in real time the spatial rainfall.

Key words: Thin Plate Spline, Hardy's Multiquadric Function, rainfall, scaling exponent

Kľúčové slová: tenkostenný splajn, Hardyho multikvadratická funkcia, dažďové zrážky, škálovací exponent

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