

MOUNTAINS' PEAKS PARAMETERISATION AND DETERMINATION

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ABSTRACT:

Detection of peaks as the upper parts of the mountains is commonly applied subjectively and manually by mountaineers. The key issue is to develop the automated methods for points of regional peaks detection applying spatial analysis on digital terrain model (DTM). Detection of the peaks bases on measurements of relative heights and distances between the peaks with support of potential surfaces fulfilling topographic and morphologic criteria. The quality of the results has been proved in four ways: visually, with the reference lists of peaks, triangulated spot heights on the topographic maps, and etymologically. The advantage of the proposed automated approaches is higher comparability, objectivity and reliability of the results. A consistent result may be attained using a DTM of high geomorphological quality and robust methods. The study was applied for the Kamnik Alps, Slovenia.

TOPIC: Physical modeling and signatures

ALTERNATIVE TOPIC: Geometric modeling