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A STUDY OF VARIABLES CHARACTERIZING DRAINAGE PATTERNS IN RIVER NETWORKS

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Abstract. In GIS and in terrain analysis, drainage systems are important components. Due to local topography and subsurface geology, a drainage system achieves a particular drainage pattern based on the form and texture of its network of stream channels and tributaries. Drainage pattern recognition helps to provide a qualitative description of the terrain for analysis and classification and is useful for terrain modelling and visualization and applications in environment. Much research has been done on the description of drainage patterns in geography and hydrology. However automatic drainage pattern recognition in river networks is not well developed. This paper introduces a method based on geometric quantitative indicators to recognize drainage patterns in a river network automatically. Experiment results are presented and discussed.

Conference Paper (PDF, 566 KB)

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