Abstract

A watershed based on rainfall simulation is a proven technique for image segmentation. The only problem associated with it is the path regularization for pixels in the plateau. As the existing methods employ sequential techniques, the complexity of the algorithms remains high due to repetitive scanning of pixels. We propose an iterative method for finding the shortest and steepest path based on Breadth first search (BFS), which addresses the path regularization problem eliminating the repetitive scans. Experiments show, that the proposed algorithm significantly reduces the running time without compensating the performance when compared with the fastest known algorithm.

References

An Improved Fast Watershed Algorithm based on finding the Shortest Paths with Breadth First Search

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Index Terms

Computer Science Pattern Recognition

Keywords

Fast Watersheds Image Segmentation Breadth First Search Shortest Path Path Regularization