Abstract

This paper investigates the use of different functions for the digital elevation model input to the watershed transform. The use of gradient information is the most frequent one, but its strength varies due to illumination variations. We investigate the two major classes of input functions, distance maps and the gradient, their combinations, and propose an different function using soft clustering memberships that is not covariant with illumination.

References

- P. S. U. Adiga and B. B. Chaudhuri. An efficient method based on watershed and
- S. Beucher and Centre De Morphologie Mathmatique. The watershed transformation applied to image segmentation, June 28 1991.
Suitability of Digital Elevation Models for Watershed Segmenting Images with Directional Illumination


Index Terms

Computer Science

Image Processing

Keywords

watershed transform  digital elevation model  partial class memberships  fuzzy c-means  directional illumination  confocal microscopy