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.
Suitability of Digital Elevation Models for Watershed Segmenting Images with Directional Illumination

- 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