
Watersheding hierarchies

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Résumé

The computation of hierarchies of partitions from the watershed transform is a well-established segmentation technique in mathematical morphology. In this work, we introduce the watersheding operator, which maps any hierarchy into a hierarchical watershed. Among the main properties of this operator, we highlight that the watersheding is idempotent and that the hierarchical watersheds are the only hierarchies that remain unchanged under the action of this operator. The applications of the watersheding operator include the computation of hierarchies based on non-increasing attributes and the refinement of coarse hierarchies, i.e., hierarchies that do not include fine regions at the lowest levels.

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