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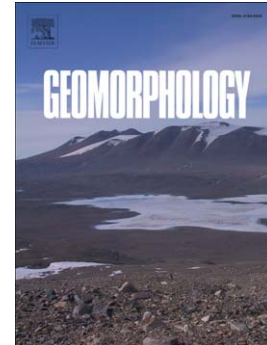
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Object-based delineation and classification of alluvial fans by application of mean-shift segmentation and support vector machines

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Abstract

In the field of geomorphology, automated extraction and classification of landforms is one of the most active research areas. Until the late 2000s, this task has primarily been tackled using pixel-based approaches. As these methods consider pixels and pixel neighborhoods as the sole basic entities for analysis, they cannot account for

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Abbreviations:

BAS:	Bilateral asymmetry
BTH:	Black top hat (grayscale) morphological filter
CCW:	Cross-sectional curvature weighting
ELA:	Equilibrium line altitude
GAD:	Gradient – apex divergence
h_s :	Spatial bandwidth
h_r :	Range bandwidth
LOOCV:	Leave-one-out cross validation
HSA:	Half-splay angle
MRS:	Multiresolution segmentation
OBIA:	Object-based image analysis
OBMA:	Object-based morphometric analysis
PFD:	Polygon fractal dimension
SAW:	Slope angle weighting
SRTM 1'':	Shuttle Radar Topography Mission DEM with 1'' posting
SVM:	Support vector machine
WTH:	White top hat (grayscale) morphological filter

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