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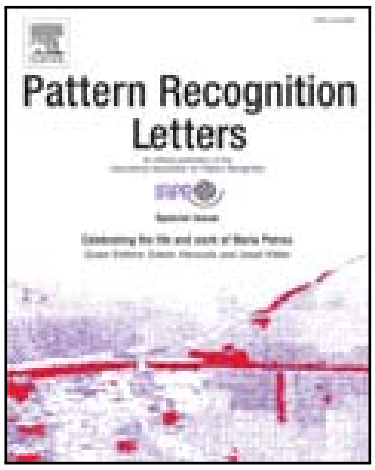

Voxel-based segmentation of 3D point clouds from construction sites using a probabilistic connectivity model

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Highlights

- A point cloud segmentation method VPM is proposed, using voxel structure and local contextual based pairwise connectivity.
- Our method avoids using color or intensity information that normally limited by the data collection and lighting conditions.
- A probabilistic model is formulated for determining the connectivity of voxels via the geometric cues in their vicinity.
- Experiments of segmenting multi-source point clouds of the complex construction site are conducted and analyzed.

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