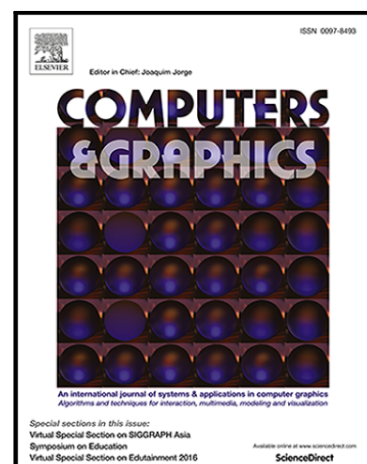


## Accepted Manuscript

Extraction of tubular shapes from dense point clouds and application to tree reconstruction from laser scanned data

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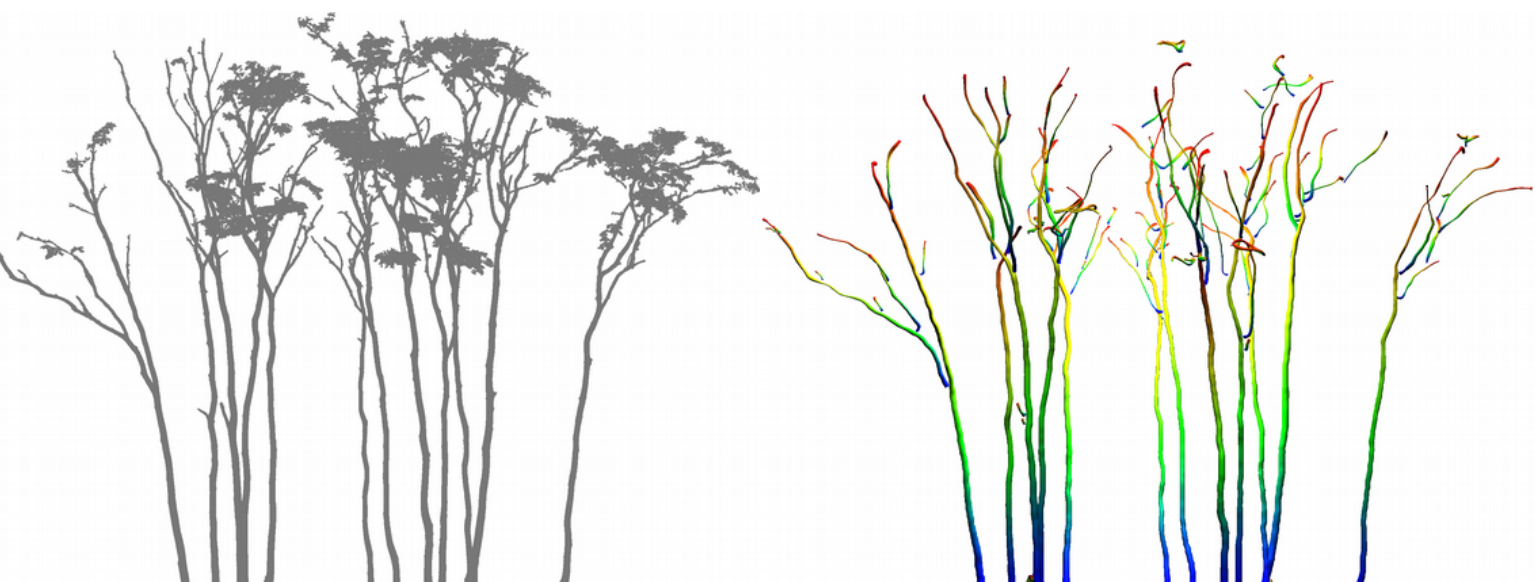
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### Highlights

- We define an original Hough transform using point normals to fasten the computation
- We introduce a generalized open growing active contour model
- Complex tubular shapes are reconstructed in the presence of noise, occlusion and point density shifts
- The presented algorithm is capable of detecting and reconstructing trees from LiDAR data



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