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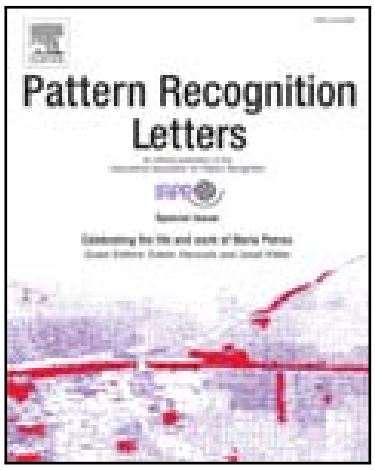


# Hough Transform for Real-Time Plane Detection in Depth Images

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PII: S0167-8655(17)30473-7
DOI: 10.1016/j.patrec.2017.12.027
Reference: PATREC 7043

To appear in: *Pattern Recognition Letters*

Received date: 26 April 2017
Revised date: 17 November 2017
Accepted date: 31 December 2017

Please cite this article as: Eduardo Vera, Djalma Lucio, Leandro A.F. Fernandes, Luiz Velho, Hough Transform for Real-Time Plane Detection in Depth Images, *Pattern Recognition Letters* (2017), doi: 10.1016/j.patrec.2017.12.027

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**Highlights**

- An efficient Kernel-Based Hough Transform for detecting planes in depth images
- Summed Area Tables and an implicit quadtree clusterize coplanar points in 2.5-D
- An efficient voting scheme is performed using a trivariate-Gaussian distribution per cluster
- An efficient gradient climbing strategy retrieves the peaks of votes in the accumulator map
- The asymptotic time complexity of our approach is $O(n)$

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