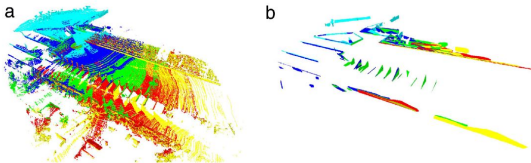# Incremental scenario representations for autonomous driving using geometric polygonal primitives

M. Oliveira, V. Santos, A. D. Sappa, P. Dias and A. P. Moreira (RAS 2016)

- ▶ Incremental 3D representation of a scene from continuous stream of 3D range sensor
- ▶ Using Macro scale polygonal primitives to model the scene
- ▶ Representation of the scene is a list of large scale polygons describing the geometric structure
- ▶ Approach to update the geometric polygonal primitives over time using fresh sensor data
- ▶ Produces accurate descriptions of the scene and is computationally very efficient compared to other reconstruction methods
- ▶ Evaluation on a dataset from the MIT team taken in the DARPA Urban Challenge