

Appearance-Based Loop Detection from 3D Laser Data Using NDT

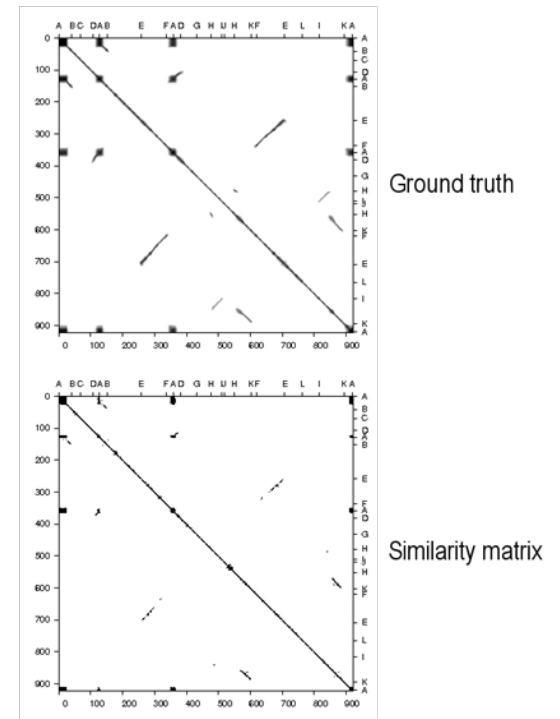
Martin Magnusson, Henrik Andreasson and Achim J. Lilienthal

AASS, Örebro University, Sweden

Andreas Nüchter

Jacobs University Bremen, Germany

- Fast 3D SLAM loop closure by matching surface shape histograms.
- Histograms based on local surface orientation and smoothness.
- Quantitative experiments on real-world data.
- Reliability comparable to visual methods: over 30% recall rate.



Evaluation: similarity matrix is similar to ground truth.