Special Session: CC-S4

Map Algorithms for Autonomous Vehicles

Organizer:

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Aims and scope of the special session:

Maps are an excellent source of environmental description data. They can be used to plan a route quickly and with high accuracy and support maneuvers realizing it. The technology strongly depends on the maps being sufficiently accurate and high resolution - like high-definition (HD) maps. Today's HD maps also contain localization objects that contributes to the continuous alternative positioning of the vehicle.

The use of map databases relies on many algorithms: the generation of map data, e.g., by mobile mapping, the detection of map changes and proper updates based on vehicle observations, the use of map data by various assistants in vehicle control and navigation, or even route selection. These options do not limit the range of possible algorithms.

This special session is also open to the results of experimental developments. Accordingly, we look forward to research outcomes like efficient map data storage, improved map update, and design and map support for more powerful or even completely new assistants, just a few examples.