

# Evaluation and development of a localization method based on non-semantic landmarks with security guarantees

## Background and state-of-the-art

- Vehicle users are demanding more and more functions that enable highly accurate 6 DoF positioning of the vehicle
- The camera is a sensor already present in every vehicle that can provide a cost-effective alternative to GNSS and IMU
- Localization by non-semantic landmarks is a known method for position determination

## Research questions

- Is the localization method sufficiently accurate to support the other sensors?
- Is this method sufficiently stable to meet the requirements of autonomous driving?
- How to determine a ground truth from the vehicle data to verify the measurements?

## Research methods

- Implementation of camera-localization in current localization architecture from BMW
- Development of a ground truth determination method
- Evaluation of localization and ground truth determination methods

