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EEI KOLLOQUIUM

Automotive Radar - Status and Trends from an Industrial Perspective

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Beginning with the commercial introduction of automotive radar about 25 years ago, an enormously increasing growth of the demand for radar systems for automotive applications can be observed. First limited to high-cost supplementary equipment for upper-class models, nowadays radar systems even find their way into the standard configurations of mid-class vehicles. In the course of this the quasi-standard applications of automotive radar, blind spot detection and adaptive cruise control, have been expanded to a much broader variety ranging from comfort functions and media control to driver assistance and safety systems. It is clear that on the way to fully autonomous driving, whose launch will be expected within the next few years, automotive radar systems will even play a more important role since they are considered as one of the key-enabling technologies.

However, despite the facts that radar systems history dates back to over 100 years and ongoing research activity in the field of radar systems continuously bring up novel ideas and concepts for radar system design and radar signal processing, the automotive industry with its main drivers cost, robustness, and functional safety does not adopt to those results instantly, but has its own perspective on the technology of current and near-future automotive radar systems. This presentation gives a technological overview on the current status and trends of automotive radar systems and outlines the radar processing concepts from this automotive industry perspective.