

Construction Sites – Safe and Without Traffic Jams

Colloquium on Safety in Road Traffic: Safe Design of Long-term Construction Sites, Country Roads, and Motorway Junctions



Safe design of motorway construction sites is one of the topics covered by the Institute of Highway and Railroad Engineering. (Photo: pixelio.de)

Mobile society and economy need safe roads and vehicles. This also includes construction sites without any traffic jams, appropriate travel speeds, and safe motorway junctions. These topics will be covered by the colloquium “Latest Developments in Road Design, Safety of Workplaces” of the KIT Institute of Highway and Railroad Engineering (ISE) under the direction of Professor Ralf Roos on Wednesday, February 09, 13.30 to 17.00 hrs, on KIT Campus South.

Many traffic participants are quite familiar with very long construction sites. Frequently, up to five construction sites of up to six kilometers length each can be found on a distance of 50 km, for instance, on the A5 between Karlsruhe and Offenburg. On these construction sites, the left lane width is 2.50 m at the maximum and the right lane width does not exceed 3.25 m. On behalf of the Hesse State Office for Roads and Transport, a research group headed by Dr. Matthias

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Zimmermann from ISE made a scientific study relating to the construction site of Mücke of about ten kilometers in length. There, special measures had been taken to improve traffic flow and safety. Among them were the temporary broadening of both motorway lanes to 3.25 m, boards informing about the remaining length of the construction site, and speed control units installed at least temporarily. These changes led to far less accidents, less traffic jams, and a much more comfortable driving feeling, found the scientists.

According to Zimmermann, the economic gain resulting from the less problem-susceptible passage is enormous. At these increased lane widths, the scientists found no indications of the length of the construction site influencing the number of accidents. The scientists did not observe any trends of the frequency or severity of accidents increasing with increasing length. On the contrary: The frequency of accidents decreased due to the broadened lanes, although traffic participants drove quicker on the average than on construction sites with a narrow left lane.

Zimmermann points out that the results of all topics covered by the colloquium will be incorporated in rules for the design of roads in the medium term. During the colloquium that will offer findings of interest to any traffic participant, Sven B. Riffel will give a presentation on the "Modeling of the Driving Behavior in Curves". Based on ISE high-accuracy measurements of driving patterns, it was analyzed, for instance, which curve designs have a negative impact on driving lines of vehicles.

Venue: KIT Campus South, Altes Bauingenieurgebäude, Otto-Ammann-Platz 1 (building 10.81), lecture hall 93.

Program

Introduction and Presentation

Professor Ralf Roos, Head of ISE

Driving Behavior and Traffic Safety at Motorway Junctions

Dijana Cindric-Middendorf, ISE

Impacts of Construction Site Design on Traffic Safety at the Overlong Construction Site of Mücke

Matthias Zimmermann, ISE

Safety and Performance of Workplaces of Longer Duration

Gerd Riegelhuth, Executive Building Director of the Hesse State Office for Roads and Transport, Wiesbaden

Travel Speeds on Roads of the Future Design Class EKL 2 according to RAL

Julia Beeh, ISE

Modeling of the Driving Behavior in Curves

Sven B. Riffel, ISE

Holistic Method for the Design of Country Roads

Professor Wolfgang Kühn
University of Zwickau

Final Discussion

Karlsruhe Institute of Technology (KIT) is a public corporation and state institution of Baden-Wuerttemberg, Germany. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. KIT focuses on a knowledge triangle that links the tasks of research, teaching, and innovation.

This press release is available on the internet at www.kit.edu.