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Contribution Abstract (Technical paper)

Topic:

1. Data Sources for Intelligent Systems and Services

Title:

New Generation of non-invasive Sensors for Road Surface Condition

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Abstract:

Reliable, easy to operate and cost effective monitoring stations on the roadside are the most important data source for road and weather condition information. In hazardous Weather situations this data sources enable information systems to gain reliable information and warnings for maintenance operators and car drivers.

A new sensor generation was developed by LUFFT GmbH, Fellbach, which belong to the smart and modular UMB Technology, introduced at the lakeside conference in 2008.

This new generation of so called "non-invasive" Sensors is able to identify the type of road condition, to detect the ice, snow and water layer thickness as well as the friction coefficient. Also the road temperature is reported. Non-invasive Sensors can be installed easily besides road without road groundwork.

The paper describes the principles of the spectral analysis method and gives first results of a numerous field applications.

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