

A U S H A N G

FREIE UNIVERSITÄT BERLIN

Fachbereich Mathematik und Informatik

Promotionsbüro, Arnimallee 14, 14195 Berlin

DISPUTATION

Freitag, 5. Februar 2021, 10:00 Uhr

[WebEx](#)

Disputation über die Doktorarbeit von

Herrn Frank Philipp

Thema der Dissertation:

Multiple camera road perception and lane level localization in urban areas

Thema der Disputation:

Software defined radio (SDR) as universal approach for the implementation of wireless data transmission

Die Arbeit wurde unter der Betreuung von **Prof. Dr. R. Rojas** durchgeführt.

Abstract:

Software defined radio is characterized by the fact that the signal processing chain is not implemented as an electronic circuit but - and this applies in particular to demodulators - as software components. This results in a great adaptability to changing transmission methods.

This type of receiver implementation is perfectly suitable for modern transmission standards based on Orthogonal Frequency Division Multiplex and digital modulation methods. They fit seamlessly into the process chain with downstream error correction and data decoding.

Updates in the transmission standard can thus be addressed by software updates. It is also conceivable that receivers could be completely rededicated as long as the hardware used is sufficient to handle the changed signal processing algorithms. The presentation shows an implementation of SDR on a specific example

Die Disputation besteht aus dem o. g. Vortrag, danach der Vorstellung der Dissertation einschließlich jeweils anschließenden Aussprachen.

Interessierte werden hiermit herzlich eingeladen

Der Vorsitzende der Promotionskommission
Prof. Dr. R. Rojas