

FREIE UNIVERSITÄT BERLIN Fachbereich Mathematik und Informatik

Promotionsbüro, Arnimallee 14, 14195 Berlin

DISPUTATION

Montag, 18. Juli 2016, 10 Uhr c.t.

Ort: SR 031, Arnimallee 7, 14195 Berlin

Disputation über die Doktorarbeit von

Herrn Bennet Fischer

**Thema der Dissertation:
Embedded vision-based environment
perception and control for mobile robotics**

**Thema der Disputation:
Embedded Stereo Vision for Mobile Robotics**

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

Abstract:

The perception of the environment is a prerequisite for most mobile robots enabling them to plan and perform actions.

However, due to their mobile nature these robots are often subject to constraints that prohibit the use of well established sensor technologies.

This talk will present the newly developed Smart Stereo Camera, a fully integrated stereo camera with embedded preprocessing and scene interpretation capabilities that is applicable despite the constraints of most mobile robotic platforms.

A local stereo vision method will be presented that achieves comparable performance to state of the art semi-global methods on a benchmark.

Also, applications in which the Smart Stereo Camera has been successfully used will be shown.

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