



Der Vorsitzende des Promotionsausschusses

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## EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

**Herr M.Sc. Tobias Baur**  
Messtechnik  
(Prof. Dr. Andreas Schütze)

am

**Montag, 20. März 2023, 15:00 Uhr s.t.**

per Videokonferenz; Link für MS Teams: [https://kurzelinks.de/PK-TBaur\\_20-03-2023](https://kurzelinks.de/PK-TBaur_20-03-2023)  
Raum für die Prüfung: Gebäude A5.1, Hörsaal -1.03, Untergeschoss

### **Thema der Dissertation:**

**Dynamic operation, efficient calibration, and advanced data analysis of gas sensors:  
from modelling to real-world operation**

This thesis demonstrates the use of dynamic operation, efficient calibration and advanced data analysis using metal oxide semiconductor (MOS) gas sensors as an example – from modeling to real-world operation. The necessary steps for an application-specific, selective indoor volatile organic compound (VOC) measurement system are addressed, analyzed and improved. Selective measurements of VOCs in the laboratory and in the field are successfully demonstrated. The calibrated models are compared with analytical measurements using release tests. The excellent agreement of the results is unique in current research.

Saarbrücken, 6. März 2023

  
Prof. Dr. Christian Motz