



University of Stuttgart  
Institute for Signal Processing and System Theory  
Professor Dr.-Ing. B. Yang



**Masterarbeit D1513**

# **Range-Doppler map upsampling for single channel chirp sequence radar using Deep Learning**

**Upsampling der Range-Doppler-Karte für einkanaliges  
Chirp-Sequence-Radar unter Verwendung von Deep Learning**

Author: Zheming Yin

Date of work begin: 01.10.2024

Date of submission: 31.03.2025

Supervisor: Sven Hinderer

Keywords: Range-Doppler map, Image up-  
sampling, Transformer, cGAN,  
Data collection, Data processing,  
Loss combination