

Einladung zu einem Promotionsvortrag

Vortragender:	M.Sc. Diana Kleingarn
Thema:	Robust Auditory Perception and Fault Resilience for Humanoid Robots in Competitive Environments
Inhalt:	The work explores methods to make humanoid robots more resilient in noisy, unpredictable environments. It develops systems for whistle detection and sound localization, enabling robots to reliably identify signals even with background disturbances. A multimodal fault detection framework combines audio anomalies with sensor data to quickly diagnose mechanical issues. Additionally, an adaptive stand-up control system improves recovery after falls by adjusting to hardware wear and environmental conditions. All approaches are tested on NAO V6 robots in RoboCup competitions, showing significant gains in robustness and autonomy. Together, these contributions demonstrate how integrated perception, diagnosis, and motion control enhance long-term operability of humanoid robots.
Termin:	02.10.2026, 10 Uhr
Ort:	Seminarraum 04.02.03 im Martin-Schmeißer-Weg 4, 44227 Dortmund, https://tu-dortmund.zoom.us/j/91073184324?pwd=13ePFcmqFTHbFeGrq8cwo4afKERk3P.1
Vortragsleitung:	Prof. Dr. Uwe Schwiegelshohn

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