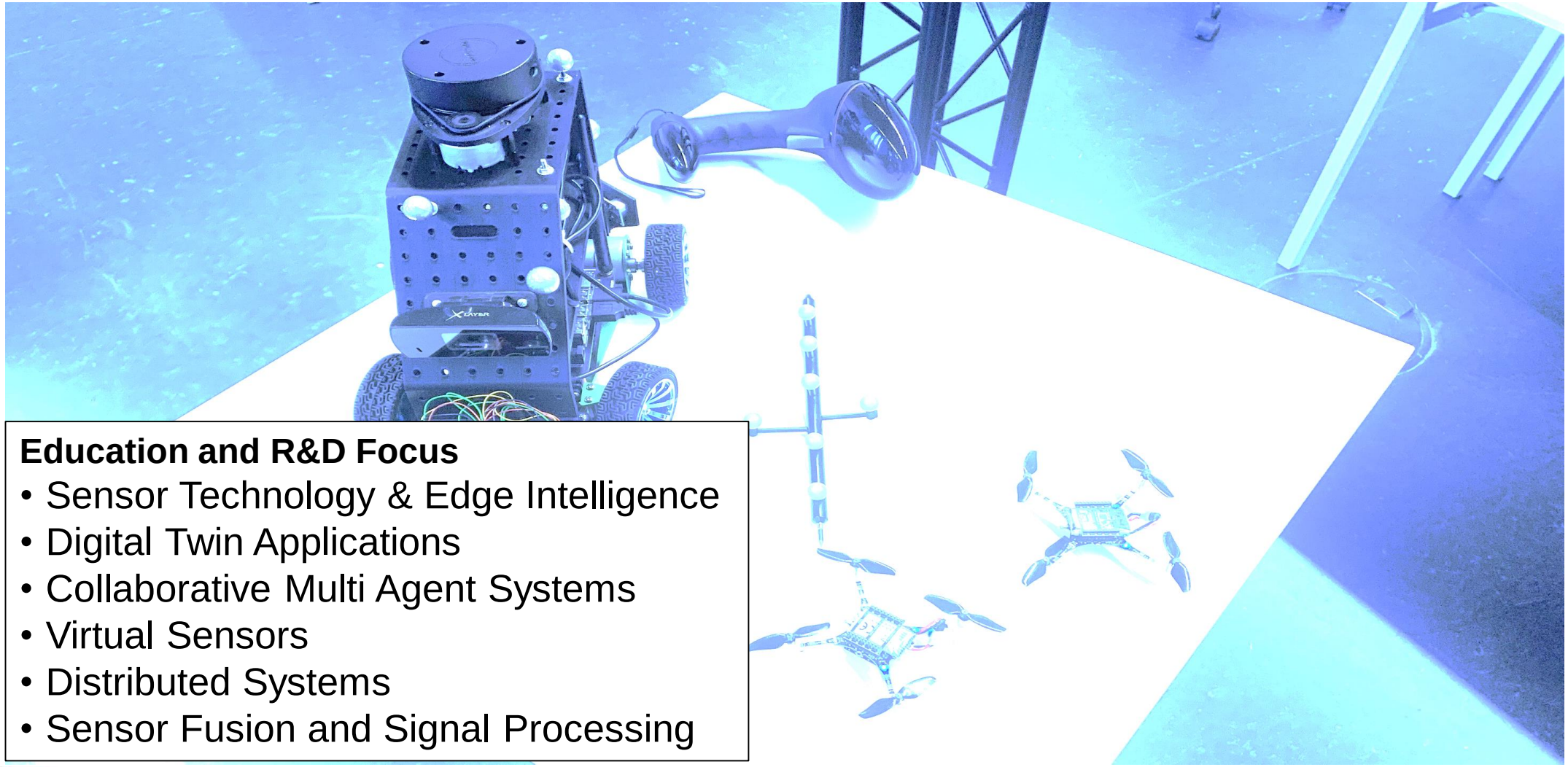
System Integration & User Interfaces Lab

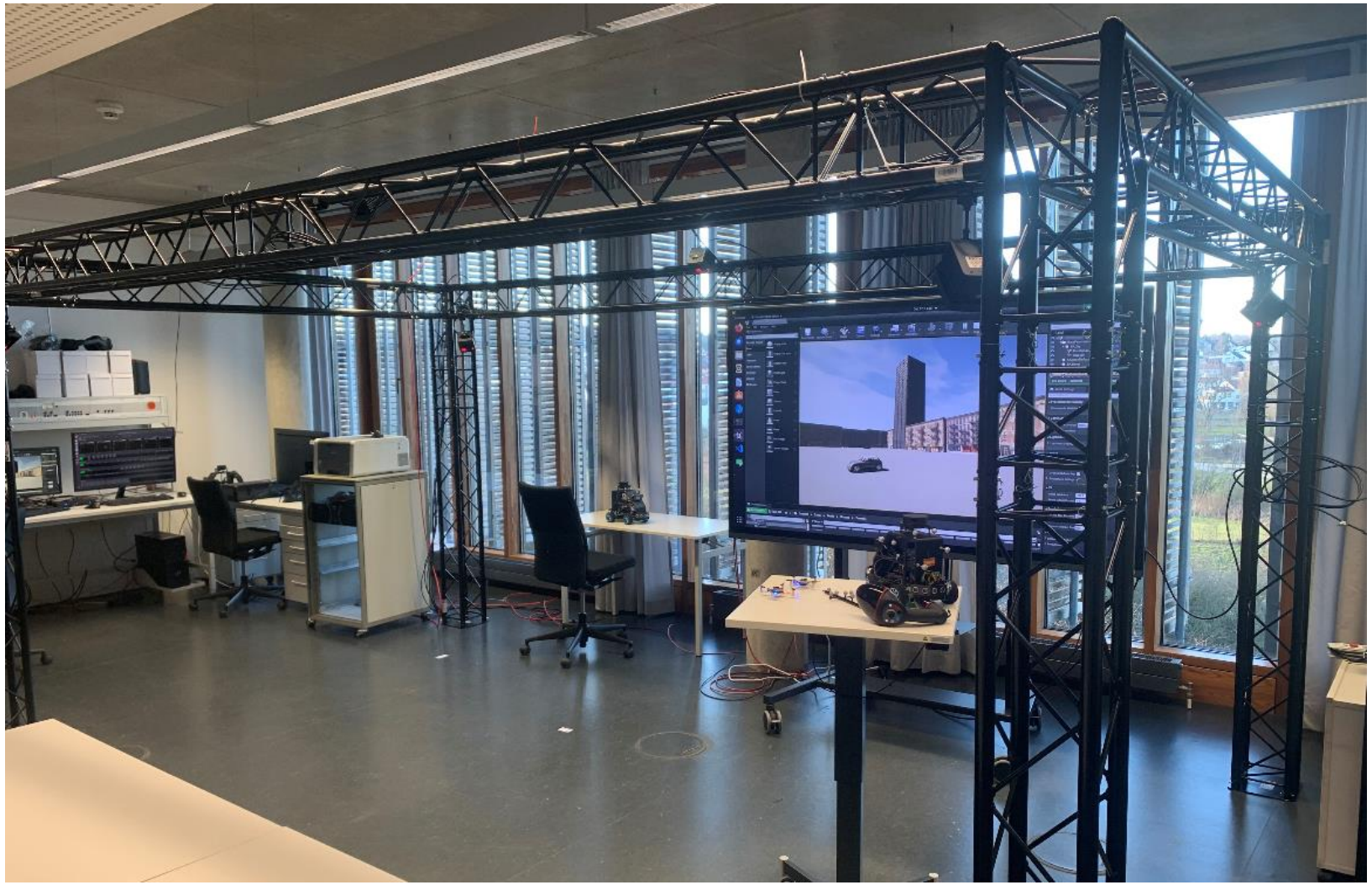


Education and R&D Focus

- Sensor Technology & Edge Intelligence
- Digital Twin Applications
- Collaborative Multi Agent Systems
- Virtual Sensors
- Distributed Systems
- Sensor Fusion and Signal Processing

Hochschule Aalen

System Integration & User Interfaces Lab



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Technical Equipment

- ARTTRACK 5 Optical Tracking System with eight rig mounted Cameras overall Measurement Volume approx. 8 m x 4 m x 2,5 m, reconfigurable
- max. frame rate: 300 Hz, accuracy: < 1 mm
- Viewsonic Viewboard Mobile Display attached to video matrix for signal distribution
- 3 Highend Graphics PCs with 32/64 GB RAM & nVidia RTX 3070/4090, OS Ubuntu 18.04/22.04 or Windows 11
- 4x Mobile Sensor Platforms equipped with Jetson Nano & nVidia GPU
- 4x Crazyflie & 2x ESP32 based Mini Drones, Size: approx. 10 cm x 10 cm
- Local WiFi Network, GitLab and Database Server
- CARLA Simulation Environment (based on UE5) running Digital Twin Applications
- Godot Simulation Environment
- HTC Vice Focus3 VR Headset
- ROS – Robot Operating System
- Embedded Systems ESP32, ST Microelectronics, …
- … and a huge bunch of different Sensor Systems





