

SHARE at NTU Joint Lab

The SHARE program comprises a global research network with leading universities around the world. The SHARE network focuses on applied research and its company-on campus concept enables particularly intensive exchange and close cooperation between Schaeffler employees, researchers, PhD candidates and students on strategically important future topics. Currently, Research & Development (R&D) expansion through Schaeffler Hub for Advanced Research (SHARE) at Nanyang Technological University (NTU) is one of the key activities for Schaeffler in Singapore.



Under Schaeffler's global R&D roadmap, SHARE is built across globally for advanced research and innovations with the following characteristics.



Long-term oriented, close collaboration with universities



Advance the state of research on strategic future topics



Knowledge gain in R&D / Innovations



Synergetic use of competencies and infrastructures



Long-term oriented qualification and inclusion of PhDs candidates and students



Securing know-how by providing an attractive and inspiring work environment.

Each SHARE has a distinct focus:

SHARE at OSU:

Solid-state battery technology

SHARE at KIT: Electric and automated mobility

SHARE at FAU: Digitalization and data science

SHARE at SWJTU:

Interurban mobility, especially railway technology

SHARE at NTU:

Robotics and Industry 4.0



2017



Establishment of SHARE at NTU

2018



Approximately 30 research scientist and students directly involved in SHARE at NTU projects

2019



Completed projects from Smart Urban Mobility device

2021



A new chapter: Move to SHARE at NTU joint lab



No. of employees expanded to 18 NTU Principal Investigators, 60 researchers & 2 SGUnited Jobs



Awarded 1st Place in the category of Innovation, Hardware, Design, and Interfaces at the 13th International Conference on Social Robotics Robot Design Competition for GraviKart robotic push trolley

A diverse range of talent

18 NTU Principal Investigators

02 Full time employees from the SGUnited Programme







60 researchers

Employees field of expertise

-  Industrial Design
-  Mechatronics Engineering
-  AI specialist
-  Embedded/Control Engineer
-  Robotics Software Engineer
-  Metaverse

Research Areas

Collaborative Industrial Robotics (Cobots)

-  Highly precise embedded sensors for torque sensing
-  Adaptive Universal Smart Gripper
-  Robotic Intelligence for complex production applications
-  Bin picking use cases for Schaeffler Plant
-  AI based safety monitoring & human-robot interaction
-  Human-robot interaction






The number of running projects

7 projects – Robotic/AMR/ IoT Smart Factory within Smart Mechatronic Lab for Industrial Collaborative Robotics in Manufacturing to support 3 key areas

-  Industrial Collaborative Robotics (Cobot)
-  Industrial Automated Mobile Robot Platforms (AMR)
-  Industrial IoT for Smart Factory Applications
-  Collaboration with local SMEs in areas **for future robotics solutions.**
-  Joined ROS-Industrial Consortium Asia Pacific to **enhance robotics project** by extending **advanced capabilities of ROS to new manufacturing applications.**

Research Areas

Autonomous Mobile Robotics Platform AMR

-  Smart e-Drive systems
-  Re-configurable Smart AMR
-  Leg control with Active Roll Stabilizers
-  Holonomic motion
-  Human interaction with gesture and voice control

IoT for Smart-Factory Applications

-  Adaptive Network Technology for Smart Factory
-  Adaptive Perception for Factory Monitoring and Maintenance Applications



No. of Invention Disclosures 18 in Phase One



Size of Lab Grew from 100 to 500



Total Amount Invested in Lab 23M SGD

