With the support of Innovation Wing, we plan to join competitions to test our knowledge and skills, also to learn from other teams and gain valuable experience. In 2022, the team build the system based on the rules of AUVSI SUAS 2023.
The AUVSI SUAS Competition is a yearly event, designed to stimulate interest in UAS technologies and careers, and to engage students in a challenging UAS mission.

SIG – Smart Elderly Walker

This project aims to develop the set of technologies to achieve convenient-to-use mobility support for daily use of the elderly. In this project, we are developing a smart elderly walker which is intended to play an active role in an elderly person's daily life, with three fundamental functionalities that do not exist or not well supported by (smart) walkers in the market: smart walking assistance; falling prevention and support; autonomous mobility.
A set of mechanical, control, sensory, and AI technologies is being developed including:
(1) novel walker mechanical structure with omnidirectional mobility and outrigger mechanisms;
(2) dual-mode actuation and control for walking/standing support and fall prevention/ recovery;
(3) multimodal sensory data collection through soft sensory skin, and data processing on device and in the cloud, for event detection and control such as user front following and fall detection;
(4) sound-source localization for elderly localisation and auto-navigation of walker.

SIG – BREED Robotics

BREED is a student group committed to developing and promoting bio-inspired technology. Our flagship VAYU project – the world's fastest robotic fish – and our upcoming initiatives such as our robotic dog aim to educate and enhance awareness in the general student body. Using designs perfected by millions of years of natural evolution, we adapt selected features into increasing effectiveness of man-made robots. We aim to establish a hub based in the Innovation Wing where this development can take root in the local community, increasing awareness and interest while promoting scientific innovation: this will be done through outreach projects, educational initiatives, as well as the continuation of various bio-inspired initiatives under BREED.

SIG – HKU RoboMaster

Robomaster is a national robotics competition for university students, hosted by DJI. The project is about forming a team to design various types of smart robots which can engage in face-to-face, videogame-style battles. The preparation process involves the knowledge in the following disciplines: mechanical and hardware design, control theory application, computer vision and smart algorithm, technical management. The ultimate purpose of the project is to develop the skills, quality and team spirit of engineering students that can be beneficial in their future career.

SIG – HKU Racing

Formula Student is a renowned educational engineering competition, combining practical engineering with soft skills including business planning and project management. It is a