

Appendix

Competition rules of “Hong Kong Tech Challenge Junior 2023-2024”

The competition consisted of three parts. The first part was Tournament, which focused on team cooperation and sportsmanship. In each match, pairs of teams were randomly assigned to cooperate with each other. Their two robots formed an alliance, controlled by their operators, and worked together to complete tasks within a 60-second game. Each team had a maximum of five rounds in the Tournament preliminaries. The Tournament finalists were determined based on the total scores in the preliminaries. The first and second-ranked teams formed one team, the third and fourth-ranked teams formed another team, and so on. The team with the highest score in the finals won the competition.

The second part was the manual and automatic skills challenge, which was optional. In this event, only one team competed at a time. In the manual challenge, participants had to control the robot manually to complete designated tasks within a time limit to earn points. In the automatic skills challenge, the robot had to complete designated tasks automatically to obtain points.

The third part was the Judges Award, where participants had to introduce their robots to the judges, including the design concept and competition strategy.

About the Centre for Innovation and Technology (CINTEC) at the Faculty of Engineering, The Chinese University of Hong Kong

As a technology transfer arm of The Chinese University of Hong Kong (CUHK), the Centre for Innovation and Technology (CINTEC) serves as a bridge between the university and industry, and facilitates open communication and industrial collaboration.

About “Robotics, STEM and Green Innovation (Phase 3)”

The “Robotics, STEM and Green Innovation (Phase 3)”, organised by CINTEC, was formerly known as the “Integration of Chinese Traditional Culture, Arts, and Robotics” programme (referred to as “Tech Art”) and has been running for 12 years since 2012. Participation has grown from an initial 30 schools to over 100.

The programme has received extensive support and achieved remarkable results for its rich content, including in-school training and community outreach activities. In order to teach more people basic knowledge about assembling and operating robots, the programme provides various robot-related workshops for partner schools and offers opportunities for the public to interact with robots. Students who have learned to design, assemble and operate robots have the opportunity to participate in the programme’s innovative robot competition, learning from participants from different schools, showcasing their work at the “InnoCarnival” to further interact with people from various sectors. In the latest programme, we continue to incorporate green and environmental elements, such as providing relevant teaching materials, arranging visits to green technologies and organising workshops for partner schools, allowing students to immerse themselves in robotic technology while caring for the environment and promoting a green lifestyle. For more details, please refer to the programme’s website: <https://www.cuhk-greenstem.com/> (Chinese version only)