Project	Principal Investigator	Abstract	Award(s)
1. An Intelligent Ocular Misalignment Measurement System	Dr Fu Hong, Assistant Professor at the Department of Mathematics and Information Technology	This fully automated machine measures ocular misalignment, with enormous potential to help mitigate the shortage of eye professionals and provide an objective method with high granular measurement.	• Gold Medal • Jury's Choice Award
2. Rapid Quantification of Microplastics Using Total Organic Carbon Analysis with Simple Sample Pretreatment	Dr Tsang Yiu-fai, Associate Professor at the Department of Science and Environmental Studies	An all-in-one semi-automatic sample pre-treatment device that can efficiently and accurately quantify microplastic abundance in water and slug samples.	• Gold Medal • Organizer's Choice Award
3. Fall Detection System for Smart City	Dr Steve Mung Wai-yin, Research Assistant Professor at the Research & Development Office	Falling in a private area can mean there is no immediate treatment, which can prove fatal. A smart fall detection system has been developed to detect people's status in private areas, such as accessible toilets, and prevent delayed treatment. This originated system includes the server and on-site fall detection hardware which are connected by Narrowband Internet of Things (NB-IoT) technology. The hardware includes a microcontroller unit and two thermal sensors. The server can then calculate the data detected by the thermal sensor and send alert signals to the backend user for detection of abnormalities.	• Gold Medal • Special Award
4. Nano-Sensor System for Meat and Seafood Monitoring	Professor Stephen Chow Cheuk-fai, Professor (Practice) at the Department of Science and Environmental Studies	A food monitoring device that offers a new and convenient way to monitor food safety, with a series of chemo sensors to detect the chemical substance released from rotting food.	• Gold Medal • Special Award

5. Revolutionising Early Childhood Education with Vision AI-led Games for Active Learning and Balanced Technology Usage	Headset Limited *(EdUHK EASE Fund Team)* TREE BEAR Limited *(External Partner)*	This invention introduces an innovative approach to early childhood education by designing Vision AI-led games that revolutionise human-mobile interaction and address concerns regarding excessive screen time. Leveraging advanced computer vision algorithms, we create interactive games that engage young children through gesture recognition, eye-detection and object tracking. By incorporating Vision AI technology, the invention enhances the learning experience, encourages physical movement, physical human interaction and limits screen time. Through immersive and educational gameplay, children develop cognitive skills while reducing their reliance on traditional screen-based activities. This invention pioneers a novel solution to balance technology usage while promoting active learning and healthy development in early childhood education.	• Gold Medal • Special Award
6. Sitting Light Volleyball and Its Functional Sports Garment	Dr Carman Leung Ka-man, Assistant Professor at the Department of Health and Physical Education	Sitting light volleyball is developed to promote the physical and mental health of people with physical disabilities or older athletes. A garment has been developed to solve limitations and movement restrictions during the exercise.	• Gold Medal • Special Award
7. Learningverse - A 3D Metaverse for Online Collaborative Learning	Dr Song Yanjie, Associate Professor at the Department of Mathematics and Information Technology	A 3D metaverse providing a custom virtual tool for online collaborative learning in school education. It enables customising of avatars and mirrors users' interactions with a computer and a webcam to enhance immersive learning.	• Silver Medal • Special Award
8. Game-basis Learning Materials for Children to Promote Healthy Eating and Be a Germ Fighter	Dr Louisa Chung Ming-yan, Assistant Professor at the Department of Health	Three board games, based on real-life, with the themes of healthy eating and infection control. They are targeted at primary students and are expected to achieve the learning objectives of 1) planning a meal of food choices based on	• Bronze medal • Special Award

	and Physical Education	the recommended 3:2:1 portion; 2) recognising the correct food groups for a balanced diet; 3) associating bacterial and viral infections and their prevention in daily life.	