Project	Principal Investigator	Description	Award(s)
1. A New Generation of Dissolved Oxygen Sensor Using Replaceable Photo-sensing Film	Professor Rudolf Wu Shiu-sun at the Department of Science and Environmental Studies (SES)	A novel device which detects and keeps a permanent record of dissolved oxygen (DO) level using replaceable photo-sensing film. It is unaffected by biofouling, thus providing a cost-effective DO monitoring over large areas of the water bodies	• Gold Medal • Top 10 Best Invention Award • Special Award
2. Reimagining Music Learning with e-Orch	Dr Leung Chi-hin at the Department of Cultural and Creative Arts (CCA)	A system consists of an app and cloud-based software which is specifically designed for musical performance and composition. Integrated with the patented Grid Notation, virtual instruments and AI music generator, the invention makes music education accessible and inclusive.	• Gold Medal • Top 20 Best Invention Award • Special Award
3. Upcycling Waste Residuals into Value-added Eco-coasters: From Environmental Facilities to Tables	Dr Tsang Yiu-fai at SES	An invention which makes use of the waste residues such as sewage sludge, bottom ash, and fly ash collected from different local environmental facilitates to produce eco-coasters. This superior houseware can be customised by the 3D printing technology.	• Gold Medal • Organizer's Choice Award • Special Award
4. Facilitating Emotion Classification Based on Non-Intrusive Learner Data via Deep Neural Networks	Dr Zou Di at the Department of English Language Education (ELE)	A single-data-source and non-intrusive emotion recognition technology based on an eye tracker. Through analysing the collected data in a deep convolutional neural network with well-trained parameters, the system is capable to recognise nine kinds of common emotions accurately.	• Gold Medal • Jury's Choice Award • Special Award

5.	Advanced Tai Chi Experience: An Integration of Novel Typefaces and AR Technology	Dr Hung Keung at CCA	A novel Tai Chi learning platform offers practitioners of all ages a new-fangled and immersive experience of traditional cultural heritage. Integrated with augmented reality (AR) technology, 3D animated Chinese Tai Chi compound typeface system, Tai Chi theory, and gamified exercise, it attracts newcomers and allows practitioners to memorise the steps and patterns effectively.	• Gold Medal • Two Special Awards
6.	UNISON: Unpaired Cross-lingual Image Captioning	Professor Philip Yu Leung-ho at the Department of Mathematics and Information Technology	An innovative AI system which generates cross-lingual (English to Chinese) image captions without relying on any paired caption corpus. The system consists of two phases: (i) a cross-lingual auto-encoding process and (ii) a cross-modal unsupervised feature mapping, which can perform real-time image to text conversion.	• Gold Medal • Special Award
7.	Personalised vocabulary learning system based on artificial intelligence techniques	Dr Zou Di at ELE	A word learning system which recommends personalised word learning tasks and paths, which solves the problem of neglecting correlations among words.	• Gold Medal • Special Award
8.	iMaze: A Fun Working Memory Training for Pre-school Children from Low-income Families	Dr Kean Poon Kei-yan at the Department of Special Education and Counselling	A digitalised toolkit tailormade for pre-school children from low income families to train their working memory. It consists of two training regimes and over 25 stimuluses.	• Silver Medal • Best Woman Inventor Award • Special Award

9. CKC Strokes – An Online Practice Tool for Chinese Strokes Writing	Dr Tse Ka-ho at the Department of Chinese Language Studies	A toolkit to facilitate Chinese language learners to learn and practise the proper way of writing Chinese characters. The recording function enables learners to capture their writing process for self-review, identification and practice.	• Silver Medal • Special Award
10. Smart hands: Are you sure?	Dr Peggy Or Pui-lai at the Department of Health and Physical Education	An interactive mobile application embedded with AI feedback mechanism, AR exercises and case scenarios, which aims to educate the public on the importance of hand hygiene	• Silver Medal • Special Award