



		advancing cancer diagnostics.
Gold Medal	<b>Professor Chan Chi-hou</b> , Chair Professor, Department of Electrical Engineering (EE); <b>Professor Stella Pang</b> , Chair Professor, EE; <b>Dr Zhu Shuyan</b> , EE, and <b>Dr Wu Gengbo</b> , Postdoc, State Key Laboratory of Terahertz and Millimeter Waves	<p><b>“Terahertz Metasurface Antenna for 6G Communications”</b></p> <p>With its novel 2D design and integration of terahertz waveguides, this high-gain metasurface antenna has broad applications in next-generation (6G) wireless communications, imaging and non-contact sensing.</p>
	<b>Professor Luk Kwai-man</b> , Chair Professor, Department of Electrical Engineering (EE); <b>Professor Stella Pang</b> , Chair Professor, EE; <b>Dr Zhu Shuyan</b> and <b>Dr Li Yuanlong</b> , EE	<p><b>“Low-profile High-gain Terahertz Antenna for Future Wireless Applications”</b></p> <p>Small and compact open-resonance antenna that can emit a steerable wideband terahertz beam with high gain and low sidelobes: critical features for next-generation (6G) high-speed wireless communication.</p>
	<b>Dr Li Haoliang</b> , Assistant Professor, Department of Electrical Engineering; <b>Dr Wang Shiqi</b> , Assistant Professor, Department of Computer Science (CS); <b>Kong Chenqi</b> , PhD student, CS, and <b>Zheng Kexin</b>	<p><b>“Echo-FAS: Acoustic-based Face Anti-Spoofing”</b></p> <p>Robust spoof-proof security system for face ID verification on mobile devices, based on live global/local 3D acoustic profiling using the existing speaker and mic, and with no need to add any expensive hardware.</p>
	<b>Professor Paul Chu Kim-ho</b> , Chair Professor, Department of Physics (PHY); <b>Dr Huang Chao</b> , Postdoc, PHY; <b>Ruan Qingdong</b> , PhD student, PHY	<p><b>“Low Cost and Large-Scale Production of Carbon Nanotubes”</b></p> <p>HK SUPER CARBON NANO TECHNOLOGY</p>

		<p>LIMITED is a HK Tech 300 start-up company supported by CityU.</p> <p>Innovative and economical process for manufacturing carbon nanotubes, costing merely 10%–20% of existing methods, with comparable excellent electrical conductivity, high strength and light weight.</p>
	<p><b>Dr Yu Xinge</b>, Associate Professor, Department of Biomedical Engineering (BME); <b>Dr Li Jiyu</b>, BME; <b>Dr Lei Dangyuan</b>, Associate Professor, Department of Materials Science and Engineering (MSE); <b>Zhou Jingkun</b>, PhD student, BME; <b>Fu Yang</b>, PhD student, MSE</p>	<p><b>“Cooling Technology for Epidermal Electronics”</b></p> <p>Ultrathin, soft, flexible surface-conforming material that integrates with and passively cools (by <math>&gt;56^{\circ}\text{C}</math>) skin-interfaced bioelectronics, allowing comfortable long-term wireless healthcare monitoring.</p>
	<p><b>Professor Stella Pang</b>, Chair Professor, Department of Electrical Engineering (EE), and <b>Dr Xu Yuanhao</b>, Postdoc, EE</p>	<p><b>“Neural Implant with Dynamic Electrode Position Control”</b></p> <p>Neural implant device containing flexible electrodes and proximity sensors in pneumatically inflatable cavities, allowing real-time electrode repositioning without the need for additional surgery.</p>
	<p><b>Dr Peggy Lo Pik-kwan</b>, Associate Professor, Department of Chemistry; <b>Dr Wang Fei</b> and <b>Dr Liu Ling-sum</b></p>	<p><b>“TNA-Based Probes for miRNA Detection”</b></p> <p>Sensitive, non-toxic, easy-to-use threose nucleic acid-based probes for cost-effective real-time detection of disease-associated target</p>

		microRNAs in living cells, with potential for use in clinical tests.
	<b>Professor Lu Jian</b> , Chair Professor, Department of Mechanical Engineering (MNE) and Department of Materials Science and Engineering (MSE); <b>Dr Li Yangyang</b> , Associate Professor, MNE and MSE; <b>Dr Zhou Binbin</b> , and <b>Shen Junda</b> , PhD student, MSE	<p><b>“Multifunctional Detection System Based on Nano-engraved Sensor”</b></p> <p>LuMAT-SERS Limited is a HK Tech 300 start-up company supported by CityU.</p> <p>Portable Raman spectrometer system for rapid on-site contaminant detection, based on a 10× reusable Nano-engraved silver-needle sensor that is up to 6× faster and 100× more sensitive than commercially available sensors.</p>
	<b>Professor Michael Lam Hon-wah</b> , Adjunct Professor, Department of Chemistry (CHEM); <b>Ms Chow Tsz-wing</b> , Research Assistant, CHEM	<p><b>“Smart Food Label: Colorimetric Chemosensor for Freshness”</b></p> <p>ZenxTag Technology Limited is a HK Tech 300 start-up company supported by CityU.</p> <p>Simple, accurate, non-toxic, non-contact test for freshness of meat and high-protein food: amine vapours released during rotting turn dye-based indicator paper from dark green (safe) to bright orange (unsafe).</p>
	<b>Dr Raymond Lam Hiu-wai</b> , Associate Head, Department of Biomedical Engineering (BME); <b>Dr Huang Wei</b> ; <b>Jiang Zhongning</b> , PhD student, BME	<b>“Label-free High-throughput Multi-physical Cell Cytometer”</b>

		<p>Microfluidic cell cytometer using AI to measure size, elastic modulus and dielectric constant of single cells at a throughput matching that of commercial flow cytometry but without the need for cell labeling.</p>
	<p><b>Dr Wu Wei</b>, Assistant Professor, School of Energy and Environment (SEE); <b>Li Fuxiang</b>, PhD student, SEE</p>	<p><b>“Energy-free PV Cooler and Water Harvester”</b></p> <p>Passive cooling system to enhance photovoltaic panel performance, by absorbing water vapour at night and desorbing it in sunlight. Harvested water can also be used for drinking, irrigation and panel cleaning.</p>
	<p><b>Professor Johnny Ho Chung-yin</b>, Department of Materials Science and Engineering (MSE); <b>Quan Quan</b>, PhD student; MSE; <b>Zhang Yuxuan</b>, PhD student; MSE; <b>Wang Wei</b>, PhD Student; MSE</p>	<p><b>“Solar-Electrocatalytic System for Hydrogen Generation”</b></p> <p>Novel solar-powered water-splitting platform to produce green hydrogen, combining photovoltaics with a highly efficient and stable dual anode–cathode made of a new 3D porous micro-nano-structured material.</p>
	<p><b>Professor Zhi Chunyi</b>, Department of Materials Science and Engineering (MSE); <b>Chen Ze</b>, PhD student, MSE; <b>Li Pei</b>, PhD student, MSE; <b>Cui Huilin</b>, PhD student, MSE</p>	<p><b>“Aqueous Batteries with Ultimate Safety”</b></p> <p>Using water as the electrolyte, these non-flammable aqueous batteries are completely safe and free from any risk of fire or explosion, even after physical damage, penetration or compression or fire exposure.</p>

	<p><b>Dr Wu Wei</b>, Assistant Professor, School of Energy and Environment (SEE); <b>Lin Haosheng</b>, PhD student, SEE</p>	<p><b>“Power-to-water Battery”</b></p> <p>Novel, versatile battery that stores surplus renewable-generated electricity as thermal energy and discharges it for rapid, scalable and sustainable atmospheric-water harvesting or humidity control.</p>
	<p><b>Dr Walid Daoud</b>, Associate Professor, Department of Mechanical Engineering (MNE); <b>Almardi Jasim Mohamed Jasim Mohamed</b>, PhD student, MNE</p>	<p><b>“Omni-direction Omni-frequency Wave Energy Converter”</b></p> <p>This wave energy converter is designed to harvest ocean waves kinetic energy from all directions using an oscillating weight inspired by the way an automatic watch harvests the kinetic energy of arm movements.</p>
	<p><b>Professor Lu Jian</b>, Chair Professor, Department of Mechanical Engineering (MNE) and Department of Materials Science and Engineering (MSE); <b>Dr Mao Zhengyi</b>, Postdoc, MNE; <b>Dr Cao Zhaowebo</b>; <b>Chen Yingxian</b>, PhD student, MSE</p>	<p><b>“EcoSponge—Utilising Solar Energy for Sustainable Freshwater Production”</b></p> <p>Eco-friendly, low-cost solar-powered device that produces enough water to meet an individual’s daily intake needs. Scalable and can be rapidly deployed in developing regions lacking clean potable water.</p>
	<p><b>Dr Zhu Zonglong</b>, Assistant Professor, Department of Chemistry (CHEM); <b>Li Bo</b>, PhD student, Department of Materials Science and Engineering; <b>Zhang Chunlei</b>, PhD student, CHEM; <b>Gong Jianqiu</b>, PhD student, CHEM; <b>Gao Danpeng</b>, PhD student, CHEM; <b>Qian Liangchen</b>, PhD student, CHEM</p>	<p><b>“HarvSolar: Eco-friendly Perovskite Photovoltaics”</b></p> <p>Eco-friendly, non-toxic, lead-free, tin-based perovskite solar cells showing enhanced power conversion efficiency (nearly 30%) and</p>

		maintaining stable performance (>95%) after continuous working for 1000 hours.
Silver Medal	<p><b>Dr Khoo Bee-luan</b>, Assistant Professor, Department of Biomedical Engineering (BME); <b>Dr Chua Song-lin</b>, Assistant Professor, Department of Applied Biology and Chemical Technology (PolyU); <b>Deng Yanlin</b>, <b>Liao Junchen</b>, <b>Li Wei</b>, and <b>Zhou Xiang</b>, PhD students, BME</p>	<p><b>“Personalised care: PIEB Biochip”</b></p> <p>MicroSen is a HK Tech 300 start-up that participated in the HKSTP IDEATION Programme.</p> <p>Low-cost microfluidic-based tumour biochip for growing clinically relevant mini-tumours from 1 mL of patient blood biopsy, allowing fast diagnosis within 1 treatment cycle, high-throughput drug screening and patient-specific cancer therapy.</p>
	<p><b>Dr Danny Lo</b>, Chief Technology Officer; <b>Ir Dr Kelvin Siu</b>, Chief Executive Officer, and <b>Mr Raymond Lau</b>, Product Manager, InnoSpire Technology Limited</p>	<p><b>“WeVoice Glasses”</b></p> <p>InnoSpire Technology Limited is a HK Tech 300 start-up company supported by CityU.</p> <p>WeVoice Glasses are speaker- and mic-equipped Bluetooth/WiFi smart glasses that, when paired with the WeVoice Plus mobile app, connect visually impaired users to audio assistance from AI or online volunteers.</p>
	<p><b>Professor Sam Kwong Tak-wu</b>, Chair Professor, Department of Computer Science (CS); <b>Dr Wang Shiqi</b>, Assistant Professor, CS; <b>Dr Wang Meng</b>, Postdoc, CS, and <b>Sun Zhenhao</b>, PhD student, CS</p>	<p><b>“Learning-based Genome Codec”</b></p> <p>Harnessing the power of neural network techniques, this computational codec (encoder–decoder) compresses genome sequence data files with</p>

		<p>much higher compression ratio than traditional tools, and is now the core technique in a new standard for genome compression.</p>
	<p><b>Dr Zhao Shijun</b>, Assistant Professor, Department of Mechanical Engineering (MNE); <b>Zhang Jun</b>, PhD student, MNE</p>	<p><b>“Superior AI Modeling of Large Atomic Systems”</b></p> <p>A deep-learning scheme based on atomic graph attention networks for fast, highly accurate modeling of long-term molecular dynamics in large multi-atomic systems, to aid in drug, material and battery design.</p>
	<p><b>Dr Edwin Tso Chi-yan</b>, Assistant Professor, School of Energy and Environment (SEE); <b>Dr Zhu Yihao</b>, Part-time Postdoc, SEE; <b>Du Yuwei</b>, PhD student, SEE, and <b>Luo Runqi</b>, Marketing Director, i2Cool</p>	<p><b>“Energy-saving Cooling Ceramic for Building Exteriors”</b></p> <p>i2Cool is a HK Tech 300 start-up company supported by CityU. Low-cost self-cooling ceramic tile for building façade/roof, able to cut air-conditioning energy needs by &gt;20% due to high broad-spectrum solar reflectivity (99.6%) and strong mid-infrared emission (96.5%).</p>
	<p><b>Professor Zhang Wenjun</b>, Chair Professor, Department of Materials Science and Engineering; <b>Dr Liu Bin</b>; <b>Dr Kong Xin</b>; <b>Mr Bu Shuyu</b></p>	<p><b>“Advanced Bifunctional Electrodes for Green Hydrogen Generation”</b></p> <p>Cosmic Hydrogen Energy is a HK Tech 300 start-up company that participated in the HKSTP IDEATION Programme.</p> <p>Low-cost, high-performance, durable</p>

		<p>electrodes for water electrolysis to produce green hydrogen, using non-precious metal electrocatalysts that function as both anode and cathode.</p>
	<p><b>Dr Khoo Bee-luan</b>, Assistant Professor, Department of Biomedical Engineering (BME); <b>Zou Shangjie</b>, PhD student, BME; <b>Chen Chun-kwan</b>, PhD student, BME; <b>Huang Ke</b></p>	<p><b>“Microplastic Concentrator (MPC)”</b></p> <p>Spiral-X is a HK Tech 300 start-up that participated in the HKSTP IDEATION Programme.</p> <p>Low-cost, portable, scalable inertial-based focusing unit that rapidly extracts small microplastics (&lt; 50 µm) from water at high recovery (&gt; 90%). Suitable for both environmental monitoring and water purification.</p>
	<p><b>Professor Tu King-ning</b>, Department of Materials Science and Engineering (MSE) and Department of Advanced Design and Systems Engineering (ADSE); <b>Dr Liu Yingxia</b>, ADSE; <b>Dr Chen Chang</b>, Postdoc, MSE</p>	<p><b>“High-performance Copper-based Filter for Fast Virus Elimination”</b></p> <p>Seth Biotech Limited is a HK Tech 300 start-up company supported by CityU.</p> <p>Made with the latest surface-coating technology, this novel copper-based antiviral mesh has porous microstructures that rapidly filter out and inactivate viruses on contact, potentially within minutes.</p>
	<p>CityU, Electrical and Mechanical Services Department (EMSD) and MTR joint-submission</p>	<p><b>“Train-borne Railway Infrastructure Inspection System”</b></p>

	<p><b>Professor Thomas Ng Shiu-tong</b>, Head, Department of Architecture and Civil Engineering (ACE); <b>Professor Eric Lee Wai-ming</b>, Associate Head, ACE; <b>Dr Lam Heung-fai</b>, Associate Professor, ACE; <b>Dr Luo Xiaowei</b>, Associate Professor, ACE; <b>Dr Zhang Zijun</b>, Associate Dean, School of Data Science (SDSC); <b>Dr Zhao Xiangyu</b>, Assistant Professor, SDSC</p>	
Bronze Medal	<p><b>Professor Yan Hong</b>, Wong Chun Hong Professor of Data Engineering and Chair Professor in the Department of Electrical Engineering; <b>Professor Xie Min</b>, Chair Professor, Department of Advanced Design and Systems Engineering, and <b>Dr Wang Zhe</b>, Postdoc, Centre for Intelligent Multidimensional Data Analysis</p>	<p><b>“Holistic AI-based Battery Health Tracker”</b></p> <p>Using powerful graph neural networks for data aggregation and feature fusion, this AI tool unifies diverse real-time data to estimate lithium-ion battery capacity more accurately than any existing method.</p>
	<p><b>Mr Forte Fung</b>, MotoNerv Limited</p>	<p><b>“MotoNerv: Intelligent Analytics of Driver Behaviour”</b></p> <p>MotoNerv Limited is a HK Tech 300 start-up company supported by CityU.</p> <p>Using the latest advances in computer vision and deep learning, this AI analytics platform provides insights into drivers’ dynamic behaviour and performance, to help improve road safety and vehicle efficiency.</p>
	<p><b>Dr Zhu Kening</b>, Associate Professor, School of Creative Media (SCM); <b>Ke Pingchuan</b>, <b>Cai Shaoyu</b>, and <b>Gao Haichen</b>, PhD students, SCM</p>	<p><b>“PropelWalker: Wearable Haptics for VR Walking”</b></p> <p>Force-feedback system for the lower legs, using fan thrust to mimic buoyancy</p>

		or resistance when walking in different virtual-reality settings, to augment gaming, training and physical rehabilitation therapy.
	<b>Professor Jing Xingjian</b> , Department of Mechanical Engineering	<p><b>“New-Gen Anti-Vibration X-Seating Technology”</b></p> <p>Innovative vehicle seat with bio-inspired X-shaped passive-damping system that suppresses ~80% of whole-body vibrations with &lt;1 Hz resonant frequency—better than all available systems for long-haul drivers.</p>
	<b>Professor Hu Jinlian</b> , Department of Biomedical Engineering (BME); <b>Dr Si Yifan</b> , Postdoc, BME; <b>Dr Guo Chunxia</b> , Postdoc, BME, and <b>Zhang Hanshui</b>	<p><b>“JanusLean Electrospun Energy Eye Mask”</b></p> <p>JanusLean Biotech Company Limited is a HK Tech 300 start-up company supported by CityU.</p> <p>World’s first nanofiber energy eye mask. When wet, nanofiber layer releases refreshing nutrients, traditional Chinese medicine and negative ions. Non-toxic; preservative-free; easy and cheap to produce, store and ship.</p>
	CityU and EMSD joint-submission <b>Dr Norman Tse Chung-fai</b> ; Associate Head, Division of Building Science and Technology (BST); <b>Dr John Chan Yau-chung</b> , Postdoctoral Fellow, BST	<b>“Electrical Doctor-Real-time Health Diagnosis for Electricity Supply System”</b>