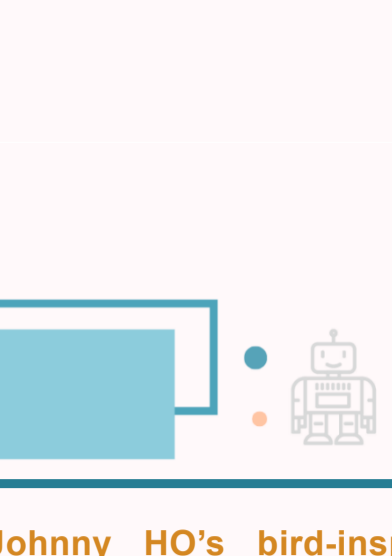


ENGINEERING THE FUTURE: IGNITING OPEN INNOVATION

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NEW FACULTY

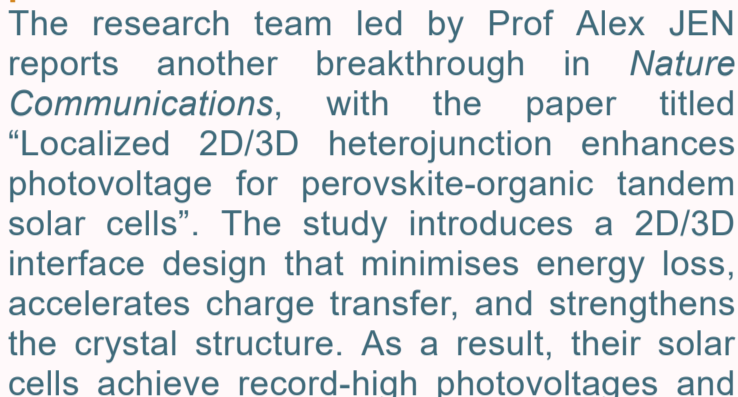
Prof Fiona KWOK, Assistant Professor, ACE
Prof Fiona KWOK joined the Department of Architecture and Civil Engineering (ACE) as an Assistant Professor in January 2026. She received her PhD in Engineering from the University of Cambridge, MEng from Massachusetts Institute of Technology, and a first-class BEng from the University of Sheffield. Before joining ACE, she served as an Assistant Professor at the University of Hong Kong. Her research focuses on landslide prediction and mitigation, sustainable geo-materials, and energy geotechnics related to oil/gas extraction and carbon sequestration.



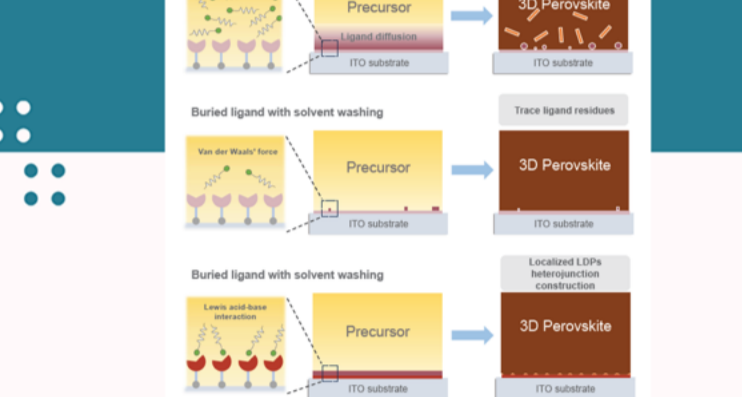
RESEARCH

Prof Johnny HO's bird-inspired vision research named among Hong Kong's Top Ten Innovation & Technology News 2025

A research breakthrough by Prof Johnny HO from the Department of Materials Science and Engineering has been recognised among Hong Kong's Top Ten Innovation & Technology News 2025, the only City University of Hong Kong project to earn this distinction. In collaboration with Central South University, Prof HO's team developed "Birdlike Broadband Neomorphic Visual Sensor Arrays for Fusion Imaging", a low-power, wearable bionic device inspired by birds' superior vision. This innovation advances machine vision and next-generation imaging, opening the door to next-generation smart cameras, robotics, and wearable AI devices that integrate seamlessly into daily life.

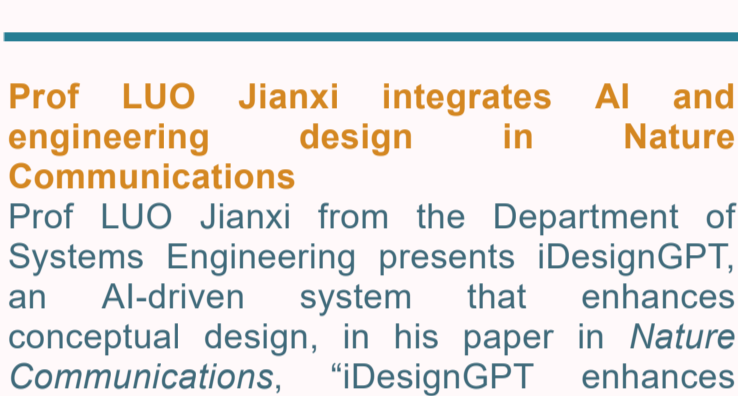


Prof Alex JEN's hydrogen-bond solar breakthrough published in Nature Energy
Prof Alex JEN from the Department of Materials Science and Engineering has published a major advance in *Nature Energy*, titled "Self-assembled molecules with hydrogen-bond networks enable efficient all-perovskite tandem solar cells". His team creates self-assembling molecules that form hydrogen-bond networks to prevent clumping and enhance charge flow in perovskite solar cells. The resulting cells deliver greater stability and efficiency, especially in stacked "tandem" designs that capture more sunlight. This innovation marks a leap toward affordable, durable solar panels that advance global clean energy adoption.



Prof Alex JEN's 2D/3D interface innovation boosting solar voltage efficiency published in Nature Communications

The research team led by Prof Alex JEN reports another breakthrough in *Nature Communications*, with the paper titled "Localized 2D/3D heterojunction enhances photovoltage for perovskite-organic tandem solar cells". The study introduces a 2D/3D interface design that minimises energy loss, accelerates charge transfer, and strengthens the crystal structure. As a result, their solar cells achieve record-high photovoltages and 27.11% efficiency (certified 26.3%). This innovation marks significant progress in high-performance, sustainable solar technologies.

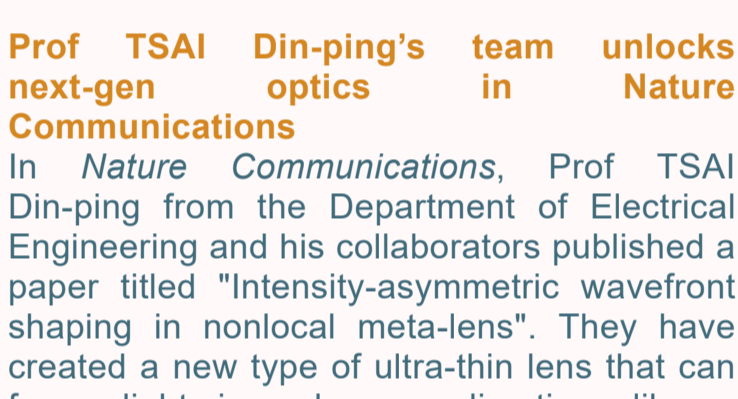


Prof LEI Danyuan's team enhances light control at the nanoscale in Science Advances

Prof LEI Danyuan from the Department of Materials Science and Engineering achieves a major optical science advance in his *Science Advances* paper, "Plasmonic tuning of dark-exciton radiation dynamics and far-field emission directionality in monolayer WSe₂". His team integrates tungsten diselenide (WSe₂) with plasmonic nanoresonators, amplifying "dark excitons", light particles that normally don't emit visible light, to make them 10,000 times brighter and faster. By adjusting resonator angles, they steer emission directionality, paving the way for next-generation quantum devices, ultrafast lasers, and high-brightness photonic displays.

Prof LUO Jianxi integrates AI and engineering design in Nature Communications

Prof LUO Jianxi from the Department of Systems Engineering presents iDesignGPT, an AI-driven system that enhances conceptual design, in his paper in *Nature Communications*. "iDesignGPT enhances conceptual design via large language model agentic workflows". The system combines large language models with systematic design strategies, enabling AI agents to interpret challenges, generate concepts, and evaluate them using creativity-focused metrics. Tested against NASA and DOE benchmarks, iDesignGPT delivers more original and modular designs than standard AI tools, showcasing how AI-human collaboration transforms engineering innovation across industries.



Precision chip alignment by Prof TSAI Din-ping and Prof Stella PANG highlighted in Nature Photonics

Prof TSAI Din-ping and Prof Stella PANG from the Department of Electrical Engineering have developed a new method to align computer chip layers with extreme precision, overcoming traditional optical limits. By using a light phenomenon called "Bound States in the Continuum", they can detect tiny misalignments based on how light travels. This technique offers a scalable, highly accurate way to improve advanced chip manufacturing using standard equipment.

Prof TSAI Din-ping's team unlocks next-gen optics in Nature Communications

In *Nature Communications*, Prof TSAI Din-ping and his collaborators published a paper titled "Intensity-asymmetric wavefront shaping in nonlocal ultra-lens". They have created a new type of ultra-thin lens that can focus light in only one direction, like a one-way mirror for lasers. By carefully designing the lens's microscopic structure, they can control light beams and their colour changes (harmonics) very efficiently. This breakthrough could lead to better self-driving car sensors (LIDAR) and faster light-based computers.

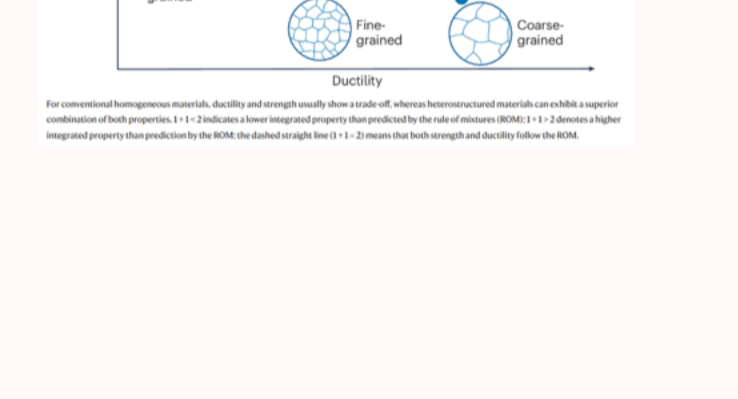


Prof TSAI Din-ping's nano-sensor breakthrough appears in Light: Science & Applications

Prof TSAI Din-ping from the Department of Electrical Engineering and collaborators published a paper "Meta-device for sensing subwavelength lateral displacement" in *Light: Science & Applications*. The paper discusses a new method for aligning computer chips during manufacturing using special "two-photon" light and advanced surfaces. This new method is much faster and more efficient than current techniques, achieving the same extreme precision while using significantly less light. This breakthrough could speed up chip production without sacrificing accuracy.

Prof ZENG Xiaocheng's observation of room-temperature ice formation in Nature Materials

Prof ZENG Xiaocheng from the Department of Materials Science and Engineering publishes findings in *Nature Materials* titled "Experimental observation of liquid-solid transition of nanoconfined water at ambient temperature". His team demonstrates that water confined in spaces narrower than two nanometres can freeze into ice at room temperature without cooling. Using advanced microscopy and quantum modelling, they capture how water molecules align and crystallise under these extreme conditions. This discovery deepens understanding of water behaviour at the nanoscale and informs future research in energy devices, climate materials, and nanofluidic engineering.

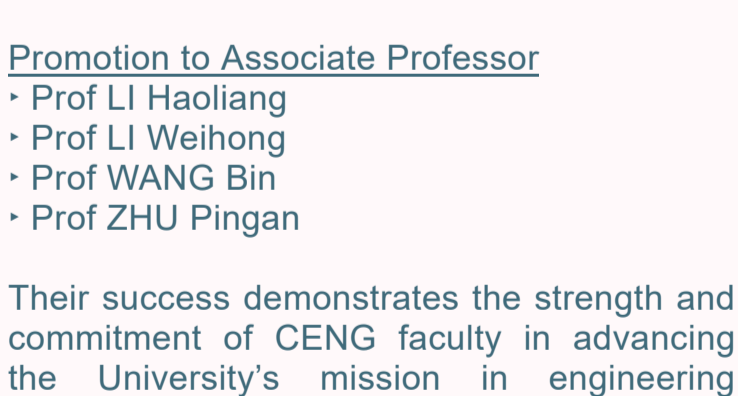


Prof ZHU Yuntian's team publishes roadmap for designing heterostructured materials in Nature Materials

Prof ZHU Yuntian from the Department of Materials Science and Engineering and his collaborators published a paper titled "Designing heterostructured materials" in *Nature Materials*. In this paper, they explained that mixing different materials to create "heterostructures" can result in stronger, better-performing composites, but simply combining them isn't enough. To truly optimise these materials, scientists must understand how the different zones interact and stress each other at their boundaries. This research explores those interactions and offers guidelines for engineering advanced materials with superior mechanical properties.

Prof TSAI Din-ping's nano-sensor breakthrough appears in Light: Science & Applications

Prof TSAI Din-ping from the Department of Electrical Engineering and collaborators published a paper "Meta-device for sensing subwavelength lateral displacement" in *Light: Science & Applications*. The paper discusses a new method for aligning computer chips during manufacturing using special "two-photon" light and advanced surfaces. This new method is much faster and more efficient than current techniques, achieving the same extreme precision while using significantly less light. This breakthrough could speed up chip production without sacrificing accuracy.



FACULTY ACHIEVEMENT

Congratulations on 13 faculty promotions at CENG

The College of Engineering (CENG) is delighted to extend its heartfelt congratulations to the following colleagues on their well-deserved promotions, in recognition of their outstanding contributions to research, teaching, and service to the University community. Their promotion will be effective on 1 July 2026.

Promotion to Chair Professor
• Prof FENG Shien Ping
• Prof LIU Bin
• Prof WANG Cheng
• Prof YIP Hin Lap

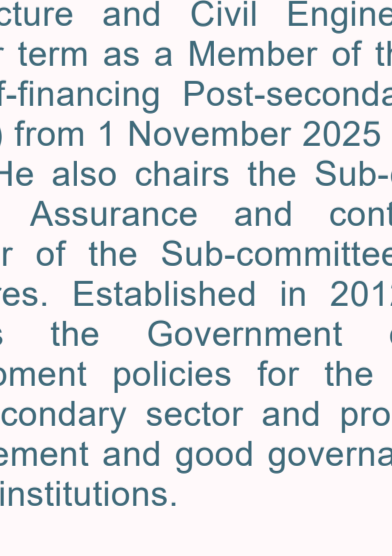
Promotion to Professor
• Prof GAO Siyang
• Prof SUN Yongjun
• Prof WANG Steven
• Prof ZENG Zhiyuan
• Prof ZHONG Xiaoyan

Promotion to Associate Professor
• Prof LI Haojiang
• Prof LI Weihong
• Prof WANG Bin
• Prof ZHU Pingan

Their success demonstrates the strength and commitment of CENG faculty in advancing the University's mission in engineering education and research.

Dr Calvin KEUNG honoured in 2025/26 TEA

Congratulations to Dr Calvin KEUNG for winning the 2025/26 Teaching Excellence Award at CityUHK. A member of the Department of Architecture and Civil Engineering, Dr Keung was recognised for his exceptional work on "Building Expertise Through Tech-Driven Innovations", a project demonstrating his dedication to teaching innovation and student success.



Prof Richard YUEN reapointed to CSPE

Prof Richard YUEN from the Department of Architecture and Civil Engineering serves another term as a Member of the Committee on Self-financing Post-secondary Education (CSPE) from 1 November 2025 to 31 October 2027. He also chairs the Sub-committee on Quality Assurance and continues as a Member of the Sub-committee on Support Measures. Established in 2012, the CSPE advises the Government on strategic development policies for the self-financing post-secondary sector and promotes quality improvement and good governance practices across institutions.

Eight CENG faculty members honoured for Teaching Excellence in Semester A, 2025/26

The College of Engineering (CENG) congratulates eight faculty members for receiving the University's "Recognition of Outstanding Teaching Performance in Semester A, 2025/26". This prestigious award acknowledges their exceptional teaching excellence, innovative pedagogies, and unwavering dedication to fostering student learning and success.

The honoured recipients are:

- Prof DANG Chuangyin
- Prof GAO Siyang
- Prof LAM Hiu Fung
- Prof Josep POU
- Prof QIU Shuang
- Prof SUN Hongyi
- Prof WANG Cheng
- Prof ZHENG Hao

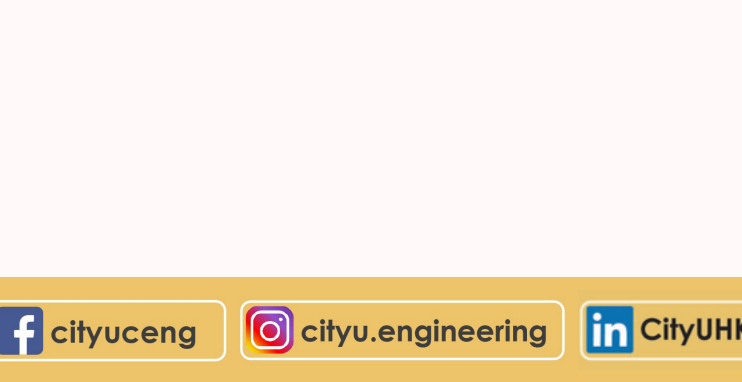
Their dedication inspires the community and strengthens CENG's global reputation in engineering education.

Hydroforge Tech, a pioneering Department of Mechanical Engineering (MNE) startup and recipient of the HK Tech 300 Seed Fund, has achieved an impressive feat by capturing the First Place (Gold) Student Entrepreneurship Award at the HK Techathon+ Global Competition.

The competition brought together outstanding startups and innovators from around the world, recognising excellence in technology and sustainability. Hydroforge Tech, founded and led by six MNE PhD students, namely Mr FAN Zhongyi, Mr Omar A. ISMAIL, Miss LIANG Yang, Mr ZHOU Deli, Mr XU Jintao, and Mr GUO Ziyang, operates under the supervision and mentorship of Prof LI Weihong.

Additionally, Mr WONG Ming Chi, a PhD student from the Department of Electrical Engineering (EE) supervised by Prof Ray CHEUNG, wins the Silver Award in the Digital Economy & Smart City category for his project "GABES Smart Fire Management" in the same competition.

Eight CENG faculty members honoured for Teaching Excellence in Semester A, 2025/26



TECHATHON+ 10TH

