ACEER 2026

July 7-10, 2026 City University of Macau, China

The 8th International Conference on Advances in Civil and Ecological Engineering Research

Conference Program

澳門會展旅遊業協會
ASSOCIACAO DOS SECTORES DE CONVENCOES, EXPOSICOES E TURISMO DE MACAU
MACAO ASSOCIATION OF CONVENTION, EXHIBITION & TOURISM SECTORS

澳門城市大學
City University of Macau

I-Shou University
Department of
Civil Engineering

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Part I Conference Schedule

Tuesday | July 7th, 2026

@ Corridor, 3/F, Luso Chinese Building, City University of Macau

14:00-18:00	**Registration**

Notice:

1. Please show us the acceptance letter or paper/abstract ID for registration.
2. Please pick up all the conference materials at the registration desk (name tag, conference program, meal tickets, and field visit ticket etc.).

Wednesday | July 8th, 2026

@ Room L309, 3/F, Luso Chinese Building, City University of Macau

09:00-09:10	**WELCOME SPEECH** *Emeritus Prof. Chih-Huang Weng, I-Shou University*
09:10-09:50	**Keynote Speech 1: Multi-Trophic Bioassay Tests for Assessing Dredged Sediment Toxicity: Screening for Safe Ocean Disposal** *Prof. Ming Hung Wong, The Education University of Hong Kong, China*
09:50-10:30	**Keynote Speech 2: Application of Nano-Foam Concrete in Prefabricated Products and Cast-in-Place Projects** *Prof. Guoxing Sun, Zhuhai UM Science & Technology Research Institute, University of Macau, China*
10:30-10:40	**Group Photo**
10:40-11:20	**Poster Presentation & TEA BREAK** (Room L105, 1/F, Luso Chinese Building)
11:20-12:00	**Keynote Speech 3: Visible-Light-Activated Antimicrobial Packaging Film Based on Tannic Acid-Crosslinked Chitosan/PVA/MgO–TiO_2 Composite: Environmental Engineering Perspectives on Reactive Oxygen Species Generation and Postharvest Preservation** *Prof. Yao-Tung Lin, National Chung Hsing University*
12:00-13:30	**LUNCH BREAK** (Room L105, 1/F, Luso Chinese Building)
13:30-18:00	**Oral Session 1: Smart Construction, Digital Management, and Sustainable Infrastructure**
18:00-18:30	**Depart for Macao Tower** Gather at: Rotunda Dr. Carlos A. C. P. D'Assumpção Bus Stop T307 (alongside the uphill road to CityU main gate) 宋玉生博士圓形地巴士站T307（城大校門上坡旁）
18:30-20:30	**Buffet Dinner at Macao Tower** (With Welcome Dinner Ticket)

Thursday | July 9th, 2026

@ Room L309, 3/F, Luso Chinese Building, City University of Macau

09:00-12:15	**Oral Session 2: Disaster Prevention, Mitigation, and Resource Management in Civil Engineering**
12:15-13:30	**LUNCH BREAK** (Room L105, 1/F, Luso Chinese Building)
13:30-17:55	**Oral Session 3: Sustainable Solutions for Pollution Control and Resource Recovery**

Friday | July 10th, 2026

One day tour in Macao City (With Field Visit Ticket)

09:00	**Depart from City University of Macau** Gather at: Rotunda Dr. Carlos A. C. P. D'Assumpção Bus Stop T307 (alongside the uphill road to CityU main gate) 宋玉生博士圓形地巴士站T307（城大校門上坡旁）
09:00-10:00	**Ruins of St. Paul**
10:00-11:00	**A-Ma Temple**
11:00-12:00	**Handover Gifts Museum of Macao**
12:00-16:00	**Free time at the Venetian Macao**

Notes: This itinerary is subject to changes based on operational needs and guide instructions.

Part II Keynote Speeches

Keynote Speech 1: Multi-Trophic Bioassay Tests for Assessing Dredged Sediment Toxicity: Screening for Safe Ocean Disposal

Keynote Speaker: Prof. Ming Hung Wong

BSc (CUHK), MSc, PhD, DSc (Durham), MBA, DSc (Strathclyde), Hon DSc (SFedU), Advisor/Chair Professor (Environ Sci), The Education University of Hong Kong, China

Biograph: Professor Wong is a Foreign Member of the Russian Academy of Sciences and a Member of the European Academy of Sciences and Arts. He served as the Editor-in-Chief of 'Environmental Geochemistry and Health' (Springer Nature), from 2002 to 2023. Professor Wong was the Coordinator of Central and North-East Asia of 'Regionally Based Assessment of PTS' and a Panel Member of 'Chemicals Management Issues of Developing Countries and Countries with Economies in Transition', sponsored by UNEP/GEF, 2001-2003 and 2010-2012. His research areas included 'Environmental toxicology', 'Ecological restoration', and 'Resource recovery'. Under Environmental Science, Professor Wong is ranked 6th for 3 years, 7th for 1 year, and 8th for 2 years (career-long) globally according to the World's Top 2% Scientists (Stanford University, 2020-2025).

Abstract: The safe ocean disposal of contaminated dredged sediments requires robust, ecologically relevant assessment protocols to evaluate risks to marine ecosystems and human health accurately. This presentation synthesises findings from two complementary studies commissioned by the Hong Kong government. The first study, for the Environmental Protection Department, developed and applied a practical, multi-trophic level bioassay battery for screening sediment toxicity. Tests were conducted on sediment elutriates using a suite of marine organisms: the bacteria Photobacterium phosphoreum (Microtox) and Escherichia coli (Toxi-Chromotest); the microalgae Skeletonema costatum and Dunaliella tertiolecta; the juvenile shrimp Metapenaeus ensis; and the juvenile fish Trachinotus blochii. Solid-phase testing was also performed with the Microtox assay. The second study, for the Civil Engineering and Development Department, investigated the bioaccumulation of contaminants in pelagic fish, benthic organisms, and sensitive species, including the Indo-Pacific Humpback Dolphin (Sousa chinensis) and humans, during the disposal process. Collectively, the results demonstrate that management decisions must be informed by site-specific biological response data from local and ecologically representative species. This integrated approach is crucial for developing robust disposal guidelines that safeguard marine biodiversity, fisheries resources, and public health.

Keynote Speech 2: Application of Nano-Foam Concrete in Prefabricated Products and Cast-in-Place Projects

Keynote Speaker: Prof. Guoxing Sun

Associate Professor, Institute of Applied Physics and Materials Engineering; Director of the Advanced Materials R&D Centre, Zhuhai UM Science & Technology Research Institute University of Macau, China

Biograph: Prof. Guoxing SUN received his Ph.D. degree in civil engineering from The Hongkong University of Science and Technology in 2015, and then worked for Nano and Advanced Materials Institute (NAMI), Hongkong. In 2017, he joined University of Macau, where he developed his career starting from assistant professor to associate professor, and was responsible for the industrialization of the new materials. He has conducted 20+ research grants of more than 4 million USD, and led a research group of more than 50 PhD students and Postdoctoral fellows, some of whom have been full professors in well-recognized universities.

Prof. Sun's research focuses on polymer nanocomposites and construction materials. He discovered a simple way for mass producing 5 nanometer particles by just using normal cement and ice water, and designed a series of high-performance polymer nanocomposite hydrogels enhanced by these cement-released nanoparticles. In 2024, the research work was personally awarded the First-Class Prize in Technological Invention by Mr. Sam Hou Fai, Chief Executive of the Macao SAR.

Contributed to industrialization, Prof. Sun invented a nanoparticle-stabilized foam, which can be simply mixed with cement slurry to fabricate strong light-weight foam concrete. The nano-foam concrete can be 2-5 times stronger or 40% lighter than the relevant market products. It has been widely used and saved 15-40% of cement usage in various construction projects of 15 cities all around the world, such as the largest land port of China, Zhuhai-Macao Hengqin Port Comprehensive Transportation Hub, and Macau Cross-Sea Bridge.

Prof. Sun was reported by China Central Television (CCTV-1, CCTV-4 and CCTV-13) for several times. He is also the recipient of the China National Excellent Young Scientists Fund (2021), Macau Science and Technology Award (2024 and 2022), Building Science and Technology Award issued by China Building Materials Federation (2018). He published over 150 papers in referred journals with total cited times over 7000, and was recognized as World's Top 2% Scientists in the past two years.

Abstract: The speaker will use two examples of industrialized technology inventions to describe how to effectively combine and apply the two different disciplines of chemistry and civil engineering to the research and development of various composite materials and talk about the stories of commercializing the research products. (1) Use cement as raw material to produce nanoparticles (size <5 nm) and use them to prepare a series of hydrogels with super elasticity, adsorption and water

swelling properties, and develop their applications in engineering, electronics, biological materials, environment and construction fields. (2) Low-cost, nanoparticle-stabilized foam that can keep stable for years, which could be used to mix with cement paste to prepare lightweight, high-strength, fire-resistant and thermally insulated foam cement. The product was widely used in fabricated lightweight wall panels for energy-efficient buildings.

Keynote Speech 3: Visible-Light-Activated Antimicrobial Packaging Film Based on Tannic Acid-Crosslinked Chitosan/PVA/MgO–TiO_2 Composite: Environmental Engineering Perspectives on Reactive Oxygen Species Generation and Postharvest Preservation

Keynote Speaker: Yao-Tung Lin

Lifetime Distinguished Professor, Department of Soil and Environmental Sciences, National Chung Hsing University

Biograph: Professor Yao-Tung Lin is a globally recognized expert in environmental engineering, with over three decades of academic and professional experience spanning carbon sequestration, high-value material innovation from agricultural and fishery waste, and advanced synchrotron-based characterization. As a principal investigator and lead scientist, Professor Lin has pioneered novel methods to transform waste into multifunctional materials with antimicrobial, antioxidant, and environmental applications. His research integrates nanotechnology, photocatalysis, and AI-driven material sensing, with special emphasis on chromatic pH-responsive indicators for wound diagnostics and food freshness. In his leadership role, Professor Lin serves as Director of the Taiwan Science and Technology Office for Net-Zero Emission under the Executive Yuan. He is responsible for developing strategies, formulating R&D budgets, and steering technological innovation to meet Taiwan's 2050 Net-Zero goals. He is also renowned for pioneering work using synchrotron X-ray imaging to visualize the 3D inactivation process of bacteria and intracellular stress responses under environmental stimuli. Professor Lin's integrative leadership connects science, policy, and sustainability toward a circular, carbon-neutral future.

Abstract: Conventional synthetic packaging materials contribute significantly to environmental pollution and the accumulation of solid waste, intensifying the demand for biodegradable, functional alternatives with intrinsic antimicrobial properties. This study presents a multifunctional chitosan/polyvinyl alcohol (CS/PVA) composite film engineered through dual-role tannic acid (TA) crosslinking and TA-mediated surface functionalization of MgO–TiO_2 photocatalysts, targeting both environmental engineering and food preservation applications. TA establishes extensive hydrogen-bonding and metal–phenolic coordination networks that anchor MgO–TiO_2 nanoparticles within the biopolymer matrix, suppressing particle aggregation while inducing ligand-to-metal charge transfer

(LMCT). This interfacial engineering broadens light absorption into the visible region and reduces charge recombination, thereby promoting the generation of reactive oxygen species (ROS: •OH and $^1O_2$) under ambient light. The optimized TA-crosslinked CS/PVA/MgO–TiO_2 film achieved a 99% increase in tensile strength, a 21% reduction in water vapor permeability, a 38% improvement in oxygen barrier performance, and a 5.5-fold increase in antioxidant activity relative to the pristine CS/PVA film. Visible-light-activated ROS production imparted pronounced antibacterial efficacy, achieving 5.8- and 5.9-log CFU mL^{-1} reductions against Escherichia coli and Staphylococcus aureus, respectively. Application trials on bananas demonstrated effective delay of surface browning, reduced weight loss, and extended shelf life of 10 days under ambient storage conditions. This work highlights polyphenol–metal coordination as a viable strategy for constructing light-responsive active packaging with integrated photocatalytic, antimicrobial, and barrier functionalities, offering a sustainable pathway toward cleaner production and circular-economy-aligned material design.

Part III Poster Session

Materials Provided by the Conference Organizer:

- ✧ X Racks & Base Fabric Canvases (60 cm×160 cm, see the figure)
- ✧ Adhesive Tapes or Clamps

Materials Provided by the Presenters:

- ✧ Home-made Posters
- ✧ Posters printed by ACEER 2026 Committee

Requirements for the Posters:

- ✧ Materials: not limited, can be posted on the Canvases
- ✧ Size: 60 cm (width) ×160 cm (height)
- ✧ Horizontal Head: please make the conference name 'ACEER 2026' and the paper number '**CEE******' as the head of the poster in order to make all the posters unified

Requirements for the Posters:

- Each presenter is required to stand by their poster during the dedicated poster session to facilitate discussion and exchange with fellow participants. The selections for **Best Poster Presentation** awards will be made during this time.
- Posters will remain on display from **10:40-11:20 on July 8th**. Presenters are responsible for removing their posters by this deadline. The Conference Secretariat will not be liable for any posters left uncollected after this time.

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<u>Best Poster Presentation Selection</u>

Selection Criteria:

- ➢ Research Quality
- ➢ Presentation Skill
- ➢ Design

Nature of the Award

- ➢ This award consists of free registration to ACEER 2027 and a certificate
- ➢ **One Best Poster Presenter** will be selected after session finishes with certificate issued and results demonstrated on ACEER 2027 website

Poster Presentations

Time: 10:40-11:20, July 8th, 2026 **Location:** Room L105, 1/F, Luso Chinese Building

Chairs:

Emeritus Prof. Chih-Huang Weng, I-Shou University
Prof. Yao-Tung Lin, National Chung Hsing University
Prof. Robert Dylewski, University of Zielona Góra

CEE2032	**Application of Intelligent Perception, Management and Maintenance of Tunnels** *Assoc. Prof. Wael A. Altabey, Alexandria University, Egypt*
CEE2033	**An Intelligent IoT-based Monitoring System for Long-Term Measurements of Pavement Performance, Management and Maintenance** *Assoc. Prof. Wael A. Altabey, Alexandria University, Egypt*
CEE2034	**SENEM and SENEM1: The New Generation of Models for Maritime Emission Control Based on Real Data and Integrated Models** *Dr. Vanesa Durán-Grados, University of Cadiz, Spain*
CEE2035	**Integration of Real Onboard Measurements to Validate Maritime Emission Models** *Dr. Rubén Rodriguez Moreno, University of Cadiz, Spain*
CEE2036	**Reducing Uncertainty in Maritime Emissions: A Unified Framework Based on Real Operational Measurements** *Dr. Vanesa Durán-Grados, University of Cadiz, Spain*
CEE2047	**Effects of Al/Mg Ratios (Al+Mg= 9 wt.%) on the Microstructure and Properties of Hot-Dip Zn-Al-Mg Coatings** *Ms. Hsin-Yu Chen, I-Shou University*
CEE2049	**Investigation into the Effects of Magnesium Content on the Microstructure and Properties of Low-Al Hot Dip Zn-Al-Mg Alloys** *Ms. Ting-Yi Su, I-Shou University*
CEE2062	**Metallic-nanoparticles-loaded Biochar Synthesis and Phosphorus Recovery from Aqueous Solutions** *Prof. Hee-Jeong Choi, Catholic Kwandong University, Republic of Korea*
CEE2070	**Geometric Classification and Morphological Characterization of Shoreline Segments along the East Coast of Korea** *Prof. Dongseob Song, Kangwon National University, Republic of Korea*
CEE2072	**Study on the Engineering Properties of Sand Asphalt Concrete Containing Steel Slag** *Dr. Wei-Jhu Wang, I-Shou University*
CEE2082	**Reservoir Operation for Flood Control Using Optimization and Machine Learning Algorithm** *Dr. Kyung Soo Jun, Sungkyunkwan University, Republic of Korea*
CEE2092	**Synthesis of Bio-based Vitrimers via Glycolysis of Lignin-modified Polyurethane Foam: Process Optimization and Self-healing Characterization** *Mr. Yi-Hao Tseng, Feng Chia University*

CEE2120	**Reaction Pathways and Mechanisms for Hydrothermal Production of Furfural and HMF from Distillers' Grains** *Mr. Zheyu Gu, Tongji University, China*
CEE2121	**Pathway Regulation Mechanism of Molybdenum-Based Catalysts for the Valorization of Typical Waste Plastics** *Mr. Mengyu Jiang, Tongji University, China*
CEE2099	**Evaluating Service-Delivery Readiness in Regional Philippine State Universities and Colleges: A LUDIP-Based Human-Capital and Support-Services Diagnostic Framework** *Dr. Niño Louie R. Boloron, Mapua Malayan Colleges Mindanao, Philippines*
CEE2078	**Comparative Evaluation of Agricultural and Industrial Waste Fibers as Potential Alternatives to Synthetic Fibers in Self-Compacting Concrete** *Ms. Angelou Faye R. Nuñez, FEU Institute of Technology, Philippines*
CEE2088	**Circular Economy of Waste Fibers Used in Concrete** *Dr. Donna Ville Gante, FEU Institute of Technology, Philippines*

Part IV Oral Sessions

General Guidelines

- ✧ Duration for Invited Oral Presentation: 20 Minutes of Presentation including 3-5 Minutes of Q&A.
- ✧ Duration for Regular Oral Presentation: 15 Minutes of Presentation including 2-3 Minutes of Q&A.
- ✧ All presenters are requested to reach the Session Room prior to the schedule and complete their presentation on time.
- ✧ Presenters should prepare Power Pointer or PDF Files for Presentation with Paper ID (**CEE******) marked on the last page or each page.
- ✧ Signed and stamped presentation certificates will be issued at the end of session.

Oral Presentation Guidelines

Devices Provided by the Conference Organizer:

- ✧ Laptops (with MS-Office & Adobe Reader) & Projectors & Screen
- ✧ Laser Sticks
- ✧ Microphones
- ✧ Please send us the PowerPoint once it is ready and have the PPT back up on a U-disk. For presenters who do not send PowerPoint, please save it in the laptop of the corresponding session 15 min in advance. Kindly tell the Session Chair (before the start of your session) that you are present.

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Best Oral Presentation Selection Procedure

ONE best presentation will be selected from EACH session based on the following criteria:

- ✓ Research Quality
- ✓ Presentation Performance
- ✓ Language Presentation
- ✓ PowerPoint Design
- ✓ **Effective Communications**

Selection Procedure

An assessment sheet will be delivered to session chairs before the session starts.

Best Oral Presentations Award

The Best Oral Presenter from each session will receive an official certificate and a free registration to the ACEER 2027.

Session 1_ Smart Construction, Digital Management, and Sustainable Infrastructure

Time: 13:30-18:00 July 8th, 2026 **Venue:** Room L309, 3/F, Luso Chinese Building

Session Chairs:

13:30-15:35 *Prof. Yoshihiro Hamaguchi, Hannan University, Japan*

15:50-18:00 *Prof. Paulo Cachim, University of Aveiro, Portugal*

13:30-13:50	CEE2117 (Invited)	**A Machine Learning-Based Spatial Estimation of Recoverable and Nonrecoverable Land Subsidence** *Dr. Tatas, Institut Teknologi Sepuluh Nopember (ITS) Indonesia, Indonesia*
13:50-14:05	CEE2040	**Carbon Black Cement-Based Sensors for Traffic Monitoring** *Prof. Paulo Cachim, University of Aveiro, Portugal; Guangxi University, China; CERIS, Portugal*
14:05-14:20	CEE2044	**Buildings User Profiles and the Economic and Ecological Profitability of Thermal Insulation** *Prof. Robert Dylewski, University of Zielona Góra, Poland*
14:20-14:35	CEE2106	**Multi-Model Comparison and SHAP-Based Interpretation for Short-Term Load Forecasting in Green Buildings** *Mr. Runpu Wang, The University of New South Wales, Australia*
14:35-14:50	CEE2080	**A Data-Driven Dashboard Model for Quantitative Monitoring of Construction Engineering Performance: Integrating Schedule Control, Cost Engineering, and Resource Control Indicators** *Mr. Erizel John Faustino, Mapua University, Philippines*
14:50-15:05	CEE2073	**AI-Driven Multi-Objective Predictive Cost Modeling in Construction Project Management: Financial Efficiency Optimization and Strategic Resource Allocation** *Mr. Jhon Paul Del Valle, Mapua University, Philippines*
15:05-15:20	CEE2119	**Adaptive Thermal Comfort Behaviours in Hospital Spaces: A Qualitative Study for Occupant-Centred Sustainable Operation in China** *Ms. Simeng Li, University College London, United Kingdom*
15:20-15:35	CEE2118	**Association Rule Mining for Soil Liquefaction Risk Assessment of Highway Bridges in Taiwan** *Prof. Chih-Lin Chen, National Pingtung University of Science and Technology*
15:35-15:50		**TEA BREAK** (Room L105, 1/F, Luso Chinese Building)
15:50-16:10	CEE2024 (Invited)	**A Review of the Impact of Digitalisation, Big Data, and AI in Society 5.0 on the Four Major Hypotheses and Income Inequality** *Prof. Yoshihiro Hamaguchi, Hannan University, Japan*

16:10-16:25	CEE2113	**Quaternions Without Imaginary Quantities or the Vector Representation of Quaternions** *Prof. Wolf-Dieter Richter, University of Rostock, German*
16:25-16:40	CEE2057	**Applications of Multi-Physics Measurements to Seabed Characterizations in Intertidal Zones and Very Shallow Waters** *Dr. Chun-Hung Lin, National Sun Yat-sen University*
16:40-16:55	CEE2123	**A Pore-Water-Distribution Model for the Estimation of the Hydraulic Conductivity of Unsaturated Soil During the Wetting Process** *Dr. Yiyao Zhu, Southeast University, China*
16:55-17:10	CEE2124	**Enhancement of Horizontal Bearing Performance and Design Methodology of Steel-Cased Cast-in-Place Piles** *Dr. Cangyan Shi, Southeast University, China*
17:10-17:30	CEE2060 (Invited)	**Green Approach to Soil Hydraulic Conductivity Reduction Using Microbial Processes** *Prof. Viroon Kamchoom, King Mongkut's Institute of Technology Ladkrabang, Thailand*
17:30-17:45	CEE2101	**Climate-Normalized Carbon Footprint Assessment of Two Municipal Buildings in a Tropical Philippine Municipality** *Dr. Niño Louie R. Boloron, Mapua Malayan Colleges Mindanao, Philippines*
17:45-18:00	CEE2116	**Neural Network Modeling of Compressive Strength of Concrete with Partial Replacement of Fine Aggregates Using Ground Granulated Blast Slag** *Dr. Roberto Rosario, FEU Institute of Technology, Philippines*

Session 2_ Disaster Prevention, Mitigation, and Resource Management in Civil Engineering

Time: 09:00-12:15 July 9th, 2026 **Venue:** Room L309, 3/F, Luso Chinese Building

Session Chairs:

09:00-10:35 *Dr. Cristina Zago, Technital S.p.A., Italy*

10:55-12:15 *Prof. Mariusz Maslak, Cracow University of Technology, Poland*

09:00-09:20	CEE2064 (Invited)	**An Integrated Approach for Managing Reservoir Sedimentation, Sediment Transport and Water Supply: The Case of Disueri Dam, Italy** *Dr. Cristina Zago, Technital S.p.A., Italy*

09:20-09:35	CEE2066	**Environmental Response Characteristics and Quantitative Regulation Theory of Gravity Heat Pipe for Deep Accumulated Temperature Dissipation in Coal Gangue Dumps** *Dr. Bailin Zhang, Taiyuan University of Technology, China*
09:35-09:50	CEE2030	**Physics-Informed DeepONET to Rapidly Solve the Free-surface Flow Problems** *Dr. Xin Qi, China Institute of Water Resources and Hydropower Research, China*
09:50-10:05	CEE2022	**Standard Duplex Versus Lean Duplex Stainless Steels - Identification of the Risk of Their Post-Fire Embrittlement** *Prof. Mariusz Maslak, Cracow University of Technology, Poland*
10:05-10:20	CEE2045	**Structural Performance of Welded Reinforcing Bars in Pre-assembled Rebar Systems** *Mr. Fu-Yuan Lu, National Kaohsiung University of Science and Technology*
10:20-10:35	CEE2079	**Electro-cementation of Calcareous Sand Using Colloidal Silica (CS) Nanoparticles and Alumina Powder** *Dr. Nermeen Fouad Ashour, The American University in Cairo, Egypt*
10:35-10:55		**TEA BREAK** (Room L105, 1/F, Luso Chinese Building)
10:55-11:15	CEE2075 (Invited)	**A Rapid Post-Earthquake Liquefaction Damage Assessment Framework for Taichung Harbor, Taiwan** *Dr. Shih-Hsun Chou, I-Shou University*
11:15-11:30	CEE2083	**Differential Impacts of Drought-Flood Abrupt Alternation and Post-Drought Rewetting on Root Growth of Summer Maize** *Dr. Wuxia Bi, China Institute of Water Resources and Hydropower Research, China*
11:30-11:45	CEE2112	**Investigating Wave Shape Effect on the Runup of Tsunamis** *Ms. Chia-Hsin Hsueh, National Taiwan University*
11:45-12:00	CEE2051	**Sustainable Utilization of Demolished Concrete Pavement as Recycled Coarse and Fine Aggregates** *Dr. Florante D. Poso, Jr., Polytechnic University of the Philippines, Philippines*
12:00-12:15	CEE2050	**Numerical Analysis of Load–Settlement Response of Shallow Foundations** *Dr. Ruffa S. Roxas, Polytechnic University of the Philippines, Philippines*

Session 3_ Sustainable Solutions for Pollution Control and Resource Recovery

Time: 13:30-17:55 July 9th, 2026 **Venue:** Room L309, 3/F, Luso Chinese Building

Session Chairs:

13:30-15:20 *Prof. Hee-Jeong Choi, Catholic Kwandong University, Republic of Korea*

15:40-17:55 *Prof. Qian Wang, Guangdong Technion - Israel Institute of Technology, China*

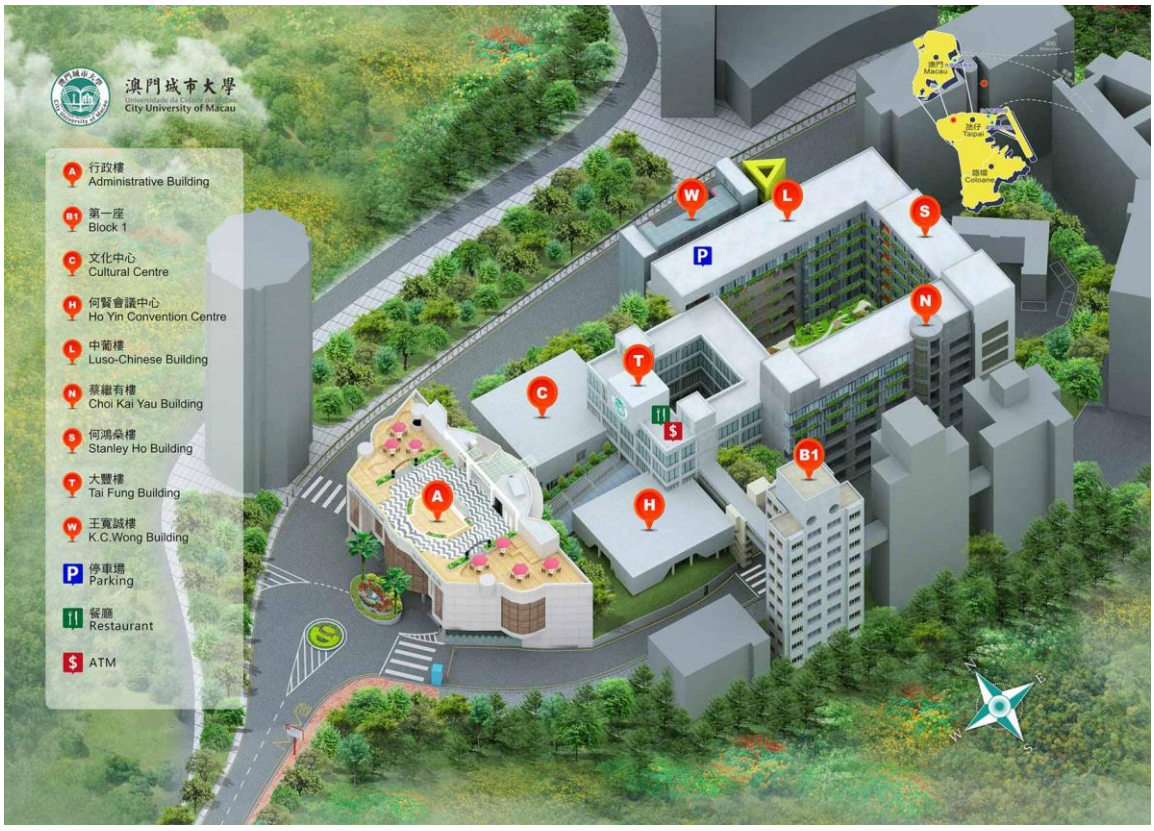
13:30-13:50	CEE2125 (Invited)	**Characterization of Phosphorus Speciation in Dairy Processing Sludge for Its Efficient Recovery** *Prof. Qian Wang, Guangdong Technion - Israel Institute of Technology, China*
13:50-14:05	CEE2021	**Towards Maritime Decarbonisation: Assessment of the Role of Hydrogen and Alternative Fuels in Spanish Ports** *Dr. Vanesa Durán-Grados, University of Cadiz, Spain*
14:05-14:20	CEE2067	**Recovery of Copper Oxide from Copper-Containing Wastewater through Fluidized Bed Homogeneous Crystallization Technology** *Mr. Wee Yan Kit, National Cheng Kung University*
14:20-14:35	CEE2068	**Application of FBHC-AOPs Technology for the Treatment of Nickel Citrate Wastewater and Recovery of Nickel in the Form of Homogeneous Crystalline Particles** *Mr. Yi-Ting Wu, National Cheng Kung University*
14:35-14:50	CEE2102	**Phosphorus Solubilization from Sewage Sludge via pH-Controlled Microwave Treatment for Vivianite Recovery** *Dr. Haozhe Mo, Guangdong Technion – Israel Institute of Technology, China*
14:50-15:05	CEE2103	**Valorization of Animal Husbandry Waste into Slow-Release Phosphorus Fertilizers through Pyrolysis** *Dr. Yukun Lu, Technion – Israel Institute of Technology, Israel*
15:05-15:20	CEE2041	**Development of a Predictive Model for Boron and Fluoride Removal via Aluminum Based Fluidized-Bed Homogeneous Crystallization** *Ms. Hsin-Yu Chung, Feng Chia University*
15:20-15:40		**TEA BREAK** (Room L105, 1/F, Luso Chinese Building)
15:40-15:55	CEE2026	**Dredging Remediation of Heavy Metal Polluted River Sediment: Effectiveness and Implications** *Dr. I-Min Wu, National Sun Yat-sen University*
15:55-16:10	CEE2087	**Feasibility of Rice-Based Floating Treatment Wetland for Simultaneous Water Quality Remediation and Crop Production** *Ms. Jie Gao, Anhui University of Science and Technology, China*
16:10-16:25	CEE2058	**Aeration Effects on Reaction Behavior in Three-Phase Photo-Fenton Reactors Using a Waste-Derived Fe–Mo Catalyst** *Mr. Cai-Sheng Lin, National Cheng Kung University*

16:25-16:40	CEE2054	**Kinetics of Nutrient-Mediated Metformin Sequestration by *Eichhornia Crassipes*** *Dr. Ireneo G. Mateo, FEU Institute of Technology, Philippines*
16:40-16:55	CEE2100	**Comparative Hydraulic Performance, Infrastructure Condition, and Water-Use Efficiency Assessment of Campus Buildings at Central Mindanao University** *Dr. Niño Louie R. Boloron, Mapua Malayan Colleges Mindanao, Philippines*
16:55-17:10	CEE2055	**Performance Evaluation of SOLIDRIS: A Solar-Powered Smart Drip Irrigation System Compared with Timer-Based Irrigation** *Ms. Lady Lyn Escarieses, FEU Institute of Technology, Philippines*
17:10-17:25	CEE2094	**Development of Probabilistic Wind Hazard Map for Disaster Resilience in Brgy. Dinahican Infanta, Quezon using ARCGIS and Generalized Extreme Value (GEV) Statistical Modeling** *Dr. Charmaine Kay Guñabo, FEU Institute of Technology, Philippines*
17:25-17:40	CEE2053	**Performance Evaluation of a Chitosan-Mediated Coagulation and Granular Activated Carbon (GAC) Filtration System for Sustainable Domestic Greywater Reclamation** *Dr. Engr. Jenny B. Calot, FEU Institute of Technology, Philippines*
17:40-17:55	CEE2059	**Steel Fiber Reinforced Self-Compacting Concrete for Corrosion Reduction** *Dr. Stephen John Coronel Clemente, FEU Institute of Technology, Philippines*
CEE2126 (Video)		**Bioaugmentation of Anaerobic Digestion of Single-Component Food Waste Using a Methanogenic Consortium** *Mr. Xiuzhu Shen, Shenyang Aerospace University, China*
CEE2090 (Video)		**Closing the Spatial-Scale Gap in Marine Plastic Debris Monitoring: An Analytical Case for Autonomous Surface Vehicles in the Pre-Fragmentation Window** *Mr. Advaith Rajagopalan, BASIS Independent Silicon Valley, USA*
CEE2110 (Video)		**Agricultural Allochthonous Dissolved Organic Matter is Associated with Microbial Functional Differentiation in Methane- and Nitrogen-Related Gene Profiles in Rural Rivers** *Mr. Yi Zhu, Tongji University, China*

Related videos are available on https://www.aceerconf.org

Part V Conference Venue

City University of Macau
Address: Avenida Padre Tomás Pereira Taipa, Macau
Website: https://cityu.edu.mo/en/



Access to Venue

1. From Macao Airport (澳门国际机场)

• About 4 KM
• Approx. 8 - 10 minutes by taxi

•• Approx. 40 minutes by bus MT1, and get off at **T300 Esparteiro/Lou Lim Ieok** (史伯泰/盧廉若站)

2. From Border Gate Terminal (澳门关闸)（注：大陆方向为拱北口岸）

• About 10 KM
• Approx. 15 - 20 minutes by taxi
• Approx. 45 - 60 minutes by bus No. 25, and get off at **T300 Esparteiro/Lou Lim Ieok (史伯泰/盧廉若站)**

3. From Hong Kong- Zhuhai-Macao Bridge Frontier Port (港珠澳大桥澳门口岸)

• About 16 KM
• Approx. 25 minutes by taxi
• Approx. 45 - 60 minutes. Take bus No.102X, and get off at **Chun Lai Garden** (泉澧花园)

4. From New Hengqin Port (横琴口岸澳门口岸)

• About 9 KM
• Approx. 20 minutes by taxi
• Approx. 30 - 40 minutes. Take bus No. 101X, and get off at **T300 Esparteiro/Lou Lim Ieok (史伯泰/盧廉若站)**

Notes: The campus is located on a hill. If alighting at Esparteiro/Lou Lim Ieok, please allow 10-15 minutes for the uphill walk. Comfortable footwear is recommended.

Part VI Acknowledgements

On behalf of the ACEER 2026 Organizing Committee, we would like to take this opportunity to express our sincere gratitude to our participants. Without their support and contributions, we would not be able to hold the conference successfully. We would also like to express our acknowledgments to the Technical Program Committee members who have given their professional guidance and valuable advice as reviewers. Below are the lists of the Technical Program Committee members. For those who contribute to the success of the conference organization without listing their names here, we would love to say thanks as well.

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Dr. Chih-Huang Weng, Emeritus Professor, Department of Civil Engineering, I-Shou University

Technical Program Committee
Dr. Ali Al-Balhawi, Mustansiriyah University
Prof. Jamila Bouchgl, Higher Institute of Marine Fisheries
Prof. Xuande Chen, University of Quebec at Rimouski
Assoc. Prof. Robert Dylewski, University of Zielona Góra
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Assoc. Prof. Xingzheng Wu, Hebei University
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