

July 02
Day 1

Paper Award A1 | Room A

Date	Time	Award Session Chair: Feng-Ming Ou
02 nd July (Thu.)	08:30 08:45	SCA2612 Can Sustainability Drive Loyalty? Evidence from Carrefour's Food Transformation Program <i>Chun-Hua Hsiao, Kai-Yu Tang, Cheng-Ping Chen</i>
	08:45 09:00	SCA2637 Integrated Structural and Thermal Optimization for High-Energy-Efficiency Battery Modules in Advanced Power Systems <i>Wei-Long Chen, Ming-Cheng Kao, Kuo-Chien Liao, Chin-Wei Wu, Kuo-Kuang Jen, Fu-Min Fang</i>
	09:00 09:15	SCA2642 A Circular Modular Facade Design Based on the Principle of Topological Interlocking <i>Gui-Ling Zhuang, Xin-Pei Chen</i>
	09:15 09:30	SCA2649 PolypDG-Lite: A Deployment-Oriented Approach for Cross-Center Colonoscopic Polyp Segmentation via Domain Generalization and Low-Power Knowledge Distillation <i>Shih-Wei Fan Chiang, Yen-Ching Chang</i>
	09:30 09:45	SCA2650 A Dual-Stage Framework for Acne Lesion Detection and Severity Grading via Slicing-Aided Hyper Inference <i>Yun-Ho Pai, Pei-Chen Kuo, Yen-Ching Chang</i>
	09:45 10:00	SCA2626 Impact of Payload Variations on the Motion Characteristics of an Open-Loop Stepper Robotic Arm <i>Hareesh Muppavarapu, Nai-Wen Chang</i>

Paper Award A2 | Room A

Date	Time	Award Session Chair: Chung-De Chen
02 nd July (Thu.)	10:15 10:30	SCA2629 Classification of Directional Relationships in Semantic Coverage for Understanding Question Correspondence across Multiple Surveys <i>Lutfi Rahmatuti Maghfiroh, Bassamtiano Renaufalgi Irnawan, Yojiro Harie, Masakazu Takahashi, Yoshimichi Watanabe</i>
	10:30 10:45	SCA2630 Impact of Spatial-Logic Flaws in Generative-AI Residential Floor Plans on User Misjudgment and Cognitive Load <i>Wang Yu, Tung-Ming Lee, Tzu-No Tseng</i>
	10:45 11:00	SCA2632 A Structural-Visual Redesign of Digital Cultural Heritage Interfaces: A Pilot Study on Cognitive Load, Perceived Readability, and Comprehension <i>Jhih-Ying Lin, Tung-Ming Lee, Tzuno Tseng</i>
	11:00 11:15	SCA2635 A Tri-Temporal Multi-Agent LLM Simulation for Cultural Sustainability in Dadaocheng: A Human-Centric Participatory Approach for Street-House Heritage <i>Tung-Ming Lee, Tzu-No Tseng</i>
	11:15 11:30	SCA2643 Coarse-to-Fine Distillation: A Conformer-to-U-Net Pipeline for Weakly Supervised COVID-19 Lesion Segmentation <i>Chung-Chieh Lien, Yen-Ching Chang</i>
	11:30 11:45	SCA2644 Ortho-Synth: 3D Conditional Diffusion Models with Signed Distance Fields for Automated Knee Implant Generation <i>Ji-Ci Li, Yen-Ching Chang</i>
	11:45 12:00	SCA2653 Lightweight AES Encryption Mechanism Based on Round-by-Round S-Box Substitution and Dynamic ShiftRows <i>Hsuan-Han Chen, Wen-Chung Kuo, Yu-Chih Huang</i>

Paper Award A3 | Room A

Date	Time	Award Session Chair: Saian Nur Fajri
02 nd July (Thu.)	13:30 13:45	SCA2654 Application of Large Language Model to Linux Audit Log-Based Attack Behavior Prediction and MITRE ATT&CK Mapping <i>Bo-Yu Yang, Wen-Chung Kuo, Yu-Chih Huang</i>
	13:45 14:00	SCA2619 Aging Detection of IGBT Modules in UPS Inverters Based on Average Park's Vector for Intelligent Condition Monitoring <i>Yi-Feng Luo, Chung-Cheng Yang, Min-En Cai, Zong-Zhen Yang, Kun-Che Ho</i>
	14:00 14:15	SCA2622 Intelligent Aircraft Surface Damage Inspection: A YOLOv9-Enhanced UAV System with Real-Time RTMP Streaming and IoT Monitoring <i>Chao-Hsien Liu, Kuo-Chien Liao, Jirayu Lau, Meiling Chung</i>
	14:15 14:30	SCA2663 Controller-Log-Based Joint Torque Modeling of a 6-Axis Collaborative Robot Using Sequential Friction-Dynamic Parameter Identification <i>Feng-Ming Ou, Rui-Peng Hong</i>
	14:30 14:45	SCA2662 Development of a Blood Pressure Recording Application Integrated with Object Detection and Artificial Intelligence Models <i>Wanida khamprapai, Naphop khumchawna, Habibah Masae, Onnicha Srisaman, Chalothon Chootong, Chatchai Kasemtaweechok</i>
	14:45 15:00	SCA2658 Multi-Worker Warehouse Reshuffling Model with Ergonomics Constraints and Mode Selection <i>Yan-Rong Huang, Yi-Hui Hu, Geng-Hong Liou, Yi-Jung Su, I-Lin Wang</i>
	15:00 15:15	SCA2659 Multi-Period Skill-Based Team Formation with Learning Effects: An Occupational Safety Audit Application <i>Shunya Kozuma, Kuo-Yo Wang, Shang-Wei Chou, I-Lin Wang</i>
	15:15 15:30	SCA2660 Multi-School Mixed-Load School Bus Routing with Heterogeneous Fleet and Student-Level Riding Time Fairness <i>Sih-Chen Lin, Yu-Chen Chen, Cho-Yueh Li, I-Lin Wang</i>
	15:30 15:45	SCA2651 Hybrid General Reasoning System (HGRS): Design and Verification of a Multi-Dimensional Reasoning AI Engine with Meta-Cognitive Reflection <i>Chung-Chi Huang, Chia-Chun Wu, Chien-Yi Wu, Yu-Lin Chen</i>

Session B1 | Onsite Oral | Room B

Date	Time	CI. Intelligent Manufacturing, Operation, and Maintenance Systems <i>Session Chair: Juihung Liu ; Tse-Yi Tu</i>
02nd July (Thu.)	08:30 08:45	SCI2611 The Achievement of a Real-Time Obstacle Avoidance System for Collaborative Robotic Arms Based on Visual Recognition Technology <i>Sheng-He Wang, Yu-Hsiang Lin</i>
	08:45 09:00	SCI2612 Generative Data Augmentation for Imbalanced CNC Tool Wear Diagnosis Using WGAN-GP <i>Shih-Han Chuang, Tse-Yi Tu, Yu-Hung Ting</i>
	09:00 09:15	SCI2615 Non-Intrusive Intelligent Predictive Maintenance for Toggle Mechanism Lubrication in Injection Molding Machines <i>Hung-Shuo Huang, Yu-Hung Ting</i>
	09:15 09:30	SCI2613 Improvement for Practical Work Assignment of Aircraft Tow Tractors at the Taoyuan International Airport <i>Hua-An Lu, Yue-Sheng Wang</i>
	09:30 09:45	SCI2616 Intelligent Maintenance Document Retrieval System for Wind Turbines Based on Domain-Adapted Embedding Models <i>Juihung Liu, Chun-Chieh Wang</i>
	09:45 10:00	SCI2617 Optimizing Random Forest Parameters for Anomaly Detection of Sintered Compact in Powder Metallurgy Processes <i>Chao-Jih Ku, Tse-Yi Tu, Hung-Kai Fan</i>

Session B2 | Onsite Oral | Room B

Date	Time	G. Green Technology & Civil Engineering ; J. Mechanical Engineering ; CH. Sustainable City, Architecture, Interior Design and Science <i>Session Chair: Yusen Lin ; Saian Nur Fajri</i>
02nd July (Thu.)	10:15 10:30	SCH2614 Three-Dimensional Vortex Structures and Wake Dynamics around Building Geometries in a Subtropical Climate: Implications for Natural Ventilation and Indoor Thermal Comfort <i>Cheng-Chen Chen, Yusen Lin, Chieh-Hung Lin, Hu-Hsiao Hsu, Yi-Kai Huang, Yu-An Chen</i>
	10:30 10:45	CG2616 Simulation Study on the Impact of Building Envelope Performance on Energy Consumption in Taiwan under Future Climate Change Scenarios <i>Yusen Lin, Yueh-Ying Liu</i>
	10:45 11:00	SCA2652 A Study on the Relationship between Pre-Sleep Ambient Lighting and Sleep Quality and Wakefulness Quality <i>Chao-Yi Ho, Yi-Kai Huang, Yusen Lin, Cheng-Chieh Hsu, Shihjhan Hong</i>
	11:00 11:15	SCH2615 Evaluation of Coupled Effects in Multi-Layer Building Envelopes for Parametric Insulation Design <i>Tsung-Ting Hsieh, Cheng-Chen Chen</i>
	11:15 11:30	SCA2634 Impact of Horizontal Shading Depth and Orientation on Building Energy Consumption under Future Climate Scenarios <i>Guan-Chuen Su, Yusen Lin, Jung-Jen Tsai</i>
	11:30 11:45	CJ2621 Buckling Strength and Adhesive Joint Reliability of a GFRP Cylindrical Pressure Hull for Underwater Vehicle Applications <i>Kai-Rong Zhang, Chin-Lung Hou, Bo-Jei Zhao, Guang-Min Luo</i>
	11:45 12:00	CJ2622 Towards Surrogate Waveform Prediction for Torque and Unbalanced Magnetic Force in Flux-Modulated Cycloidal Magnetic Gears <i>Saian Nur Fajri, Yi-Chang Wu, Feng-Ming Ou, Nurida Oktavia</i>

Session B3 | Onsite Oral | Room B

Date	Time	G. Green Technology & Civil Engineering ; J. Mechanical Engineering ; M. Innovation Management ; CC. Applications in Intelligent Technology ; CD. Innovations on Imaging Processing ; CG. Advances in Vehicles and Railway Vehicle System <i>Session Chair: Yaojung Shiao ; Chung-Liang Chang</i>
02 nd July (Thu.)	13:30 13:45	SCG2613 Seat Vibration Reduction in a Heavy-Duty Diesel Vehicle by a Smart Magneto-Rheological Damping System <i>Yaojung Shiao, Huynh Tan Linh, Szu-Wei Huang</i>
	13:45 14:00	CG2614 Beyond Maintenance: Quality-Assured Decision-Making for Infrastructure Replacement Subject to Imperfect Maintenance <i>Sou-Sen Leu</i>
	14:00 14:15	CM2611 Promoting Innovative Sustainable Fashion: A Perceived Environmental Awareness Perspective on Consumer Recycling and Purchase Intentions <i>Chun-Hua Hsiao, Kai-Yu Tang</i>
	14:15 14:30	CM2612 From Green Brand Image to Customer Citizenship Behavior: The Mediating Role of Brand Attachment among Automobile Consumers <i>Jin-Long Liang</i>
	14:30 14:45	CJ2618 A New Technique for Identifying Concurrent Rotor Faults: A Jeffcott Rotor Case Study of Imbalance and Shaft Bow <i>Shyh-Chin Huang, Thanh-Trung Pham</i>
	14:45 15:00	CJ2619 Numerical Analysis of Vibratory Stress Relief of SS400 Structural Steel Using the Chaboche Model <i>Chih-Han Wu, You-Ren Chen, Chih-Kuang Lin, Yi-Mei Huang</i>
	15:00 15:15	SCD2613 Enhancing TLS 1.3 with Post-Quantum Resilience: Design and Implementation of an Identity-Binding Tagging Mechanism via wolfSSL <i>Tse-Chuan Hsu, Hsin-Han Lu</i>
	15:15 15:30	SCD2611 Topology Guided 3D Cut Point Localization for Dragon Fruit Harvesting <i>Ping-Chieh Li, Chung-Liang Chang</i>
	15:30 15:45	SCC2611 Human-AI Collaborative Coaching in Entrepreneurial Learning Development <i>Chou-Kang Chiu, Chieh-Peng Lin</i>

Poster C1 | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
02 nd July (Thu.)	08:30 10:00	1	CA2614 Microstructural Features and Tensile Mechanical Behaviors of Friction Stir Welded Dissimilar AM60B-Zn Joints <i>Chung-Wei Yang, Kun-Xiang Shi, Her-Yueh Huang</i>
		2	CA2618 Efficient Quantum Transport Simulations in Bilayer Graphene via a Valley-Preserving Square Lattice <i>Szu-Chao Chen, Alina Mreńca-Kolasińska, Ming-Hao Liu</i>
		3	CA2619 Characteristics of KPbI3 Perovskite Thin Films and Application for Near-Infrared Light-Emitting Diodes <i>Yu-Li Chang Chien, Lung-Chien Chen</i>
		4	CA2620 Resistive Switching Characteristics of RF-Sputtered Sm2Hf2O7 Thin Films <i>Ching-Tang Chen, Cheng-Liang Huang</i>
		5	CK2611 Effect of Li3PO4 Coating on Single-Crystal Ni-Rich NCM Cathode Materials Prepared by Solid-State Method for Lithium-Ion Batteries <i>Hyun-Soo Kim, Seong-Ju Sim, Bong-Soo Jin, Jun-Ho Park</i>
		6	CK2612 A Study on the Corrosion Behavior of Zirconium-Based Metallic Glass Thin Films Using ECAFM in a 1mM HCl Aqueous Solution <i>Jen-Ching Huang, Jyh-Wei Lee, Yi-Chia Liao</i>

Poster C1 (continued) | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
02 nd July (Thu.)	08:30 10:00	7	SCF2613 Mechanical and Fracture Properties of Nanoparticle Enhancement of Polymer Composite <i>Chi-Fan Liu, Shih-Ying Su, Yu-Teng Lin, Tao-Hsing Chen</i>
		8	SCF2614 Strain Rate Effects on the Mechanical and Microstructural Behavior of Cu-Based Amorphous Alloys <i>Wen-Nan Wang, Yu-Teng Lin, Tao-Hsing Chen, Yu-Rui Huang</i>
		9	SCF2615 Effect of Surface Modification on the Mechanical Properties of Thermoplastic Composites Reinforced with Microwave Pyrolysis Recycled Carbon Fibers <i>Chin-Lung Chiang, Chen-Hung Liu, Hung-Chin Liu, Ming-Yuan Shen</i>
		10	SCB2611 Innovative Oxygen Flow Strategies for InWSnO Thin Films and MSM Photodetectors <i>Sheng-Po Chang, Cheng-Lun Chou Huang, Tsung-I Liao, Shoou-Jinn Chang, Chih-Han Chen</i>
		11	SCB2613 Research and Application of Microprobe Skin Patches for Skin Glucose Detection <i>Wen-Cheng Kuo, Wei-Jun Hsu, Hao-Hsin Tsai</i>
		12	CF2620 A Spatial-Temporal Transfer Learning Framework for Robust Cross-Environment Underwater Acoustic Demodulation <i>Ze-Xiang Wang, Imam Syaroni, Chih-Ta Yen</i>

Poster C2 | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
02 nd July (Thu.)	10:15 12:00	1	CJ2611 Design of a Flexible Multi-Point Piezoresistive Plantar Pressure Platform with Wireless Data Transmission <i>Zhao-Chi Chen, Yu-Wen Lu</i>
		2	CJ2612 Development of a Detection Equipment for Wafer Thickness Variation <i>Hsueh-Liang Huang, Kuan-Chen Lin</i>
		3	CJ2613 Optimizing Thermal Transfer in Finned Pneumatic Extruders for Biomedical Applications <i>Chuan-Chieh Liao</i>
		4	CJ2617 Hygrothermal Effect on Statically Tensile Strength of Nano Reinforced Adhesively Bonded Joints of Dissimilar Materials <i>Yi-Ming Jen, Zhe-Min Lin</i>
		5	SCG2611 Parametric Optimization Design for a Railway Vehicle Bogie Frame <i>Yung-Chuan Chen, Yao-Nan Wang, Li-Wen Chen, Wei-Hua Lu, Chun-Hung Ke</i>
		6	SCG2612 Simulation and Analysis of Flying Dynamics for a New VTOL Unmanned Aerial Vehicle <i>Yaojung Shiao, Tzu-Hsun Lin</i>

Poster C2 (continued) | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
02 nd July (Thu.)	10:15 12:00	7	SCG2614 Empowerment of Learning Effect of Engineering Mathematics by Inquiry-Based Learning with Computational Thinking <i>Meiling Jow, Yaojung Shiao</i>
		8	SCI2614 Low-Cost Energy Monitoring and Quality Optimization for Injection Molding <i>Min-Syuan Wong, Wen-Ren Jong, Ai-Ling Chen</i>
		9	CJ2620 Effect of Processing Parameters on the Impact Performance of W-Shaped Carbon Fiber Thermoplastic Composites <i>Shun-Fa Hwang, Hsin-Hui Huang</i>
		10	CE2611 Synergistic Multi Wavelength Photobiomodulation for Accelerated Chronic Wound Healing <i>Yu-Hsiang Tang, Jun-Sheng Wang, Chun-Chiang Huang, Che-Chin Chen</i>
		11	CE2612 Measurement and Predictive Model Analysis of a Non-Invasive Physiological Sensing Device for Live Fish <i>Yi-Zhi Zhang, Shu-Yan Li, Shih-Hao Huang</i>
		12	CD2613 Continuous Tuning of Liquid Crystal Pretilt Angles via Interplay Between Gelator Doping and Planar Anchoring <i>Hui-Chi Lin, Li-Yun Ke</i>

Poster C3 | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
02 nd July (Thu.)	13:30 15:45	1	CC2613 Transient Dark/Photo Current and Transport Mechanisms in PtOx/Ga2O3 Schottky Deep-UV Photodetectors <i>Hsiang-Ning Wang, Chun-Kai Wang, Yu-Zung Chiou</i>
		2	CC2616 Study on In2O3-Based Triboelectric Nanogenerators Fabricated by the Sputtering Method <i>Wei-Chieh Hsiung, Ting-Jen Hsueh</i>
		3	CC2617 A LLC-Based Latching Current Limiter Using Frequency-Modulated-Voltage Control for Power Converters <i>Yu-Kai Chen, Wen-Chung Liu, Ye-Shun Shen, Bo-Xin Fang</i>
		4	CC2618 A Miniaturized 0.9 GHz and 2.4 GHz Dual-Band Branch-Line Coupler with Folded Microstrip Lines <i>Syuan-Ming Huang, Cheng-Shong Hong, Pin-Hao Jiang, Jian-Ming Wu</i>
		5	CC2619 Performance Comparison of Full-Bridge and Half-Bridge LLC Resonant Converters for High Step-Down Ratio Applications <i>Kai-Che Chou, Yu-Kai Chen, Shih-Ting Chiu</i>
		6	CC2620 High-Precision SOC Estimation for Lithium-Ion Batteries in CubeSats Using a Hybrid Coulomb Counting and First-Order ECM Approach <i>Yi-Hsiang Huang, Bo-Hui Chen, Yu-Kai Chen, Ye-Shun Shen</i>

Poster C3 (continued) | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
02 nd July (Thu.)	13:30 15:45	7	CC2621 Design and Implementation of High-Reliability Electrical Power System for 6U CubeSat <i>Bo-Hui Chen, Yu-Kai Chen, Wen-Chung Liu</i>
		8	CC2622 Sum-Rate Maximization for RIS-Assisted Wideband OFDM Systems with 1-Bit Phase Shifters under Mutual Coupling <i>Yan-Xuan Huang, Jung-Chieh Chen</i>
		9	SCA2621 Simulation and Analysis of Induced Voltages and Currents in Transmission Towers during Maintenance Outage Operations <i>Kun-Long Chen, Bing-Jia Xie, Cheng-Yi Shen</i>
		10	CD2611 Laser Induced Long-Period Gratings in Photonic Crystal Fiber <i>Chien-Hsing Chen, Jhen-Yi Wu, Chen-Yuan Wu, Jr-Ming Miao, Chun-Fa Cheng</i>
		11	CD2612 Single-Frequency Erbium Fiber Laser with Sub-kHz Linewidth by Hexa-Ring Design <i>Nai-Yi Lu, Bo-Xiang Wu, Chien-Hung Yeh, Jing-Heng Chen, Kun-Huang Chen</i>
		12	CD2615 OAM-Based Simultaneous Optical Information and Power Transfer for Optical Camera Communication with Deep Learning Demodulation <i>Bo-Ren Lin, Hsu-Chih Cheng</i>

July 03
Day 2

Session A4 | Onsite Oral | Room A

Date	Time	CF. Advances in Computational Material and Related Application ; CG. Advances in Vehicles and Railway Vehicle System ; CH. Sustainable City, Architecture, Interior Design and Science <i>Session Chair: Shang-Yuan Chen ; Gui-Ling Zhuang</i>
03rd July (Fri.)	08:30 08:45	SCF2612 Fault Detection for Highly Coupled Signals in the Piercing Process Based on Multivariate Variational Mode Decomposition <i>Wei-Ling Wang, Tsung-Liang Wu</i>
	08:45 09:00	SCH2611 A Dynamic LCA Framework for Circular Modular Housing Design <i>Gui-Ling Zhuang, Yueh-Ying Lin</i>
	09:00 09:15	SCH2616 Pressure Paradox of Stairwell Smoke Control: CFD Simulation Prediction and Configuration Optimization for Postpartum Care Centers <i>Shang-Yuan Chen, Yu-Hsiang Huang, Yen-Hsiu Shen</i>
	09:15 09:30	SCG2616 Fatigue Life Prediction of a Scooter Structure <i>Hsiu-Ying Hwang, Hung-Chun Chang, Kai-Po Wei</i>
	09:30 09:45	SCG2617 Collision Analysis of a Motorcycle <i>Hsiu-Ying Hwang, Hong-Ru Chen</i>
	09:45 10:00	SCG2618 Development and Validation of a Pantograph System for Light Rail Vehicles <i>Cheng-Hao Huang</i>

Session A5 | Onsite Oral | Room A

Date	Time	F. Computer & Information Engineering ; G. Green Technology & Civil Engineering ; CD. Innovations on Imaging Processing <i>Session Chair: Yi-Hung Liu ; Cheng-Hsiu Li</i>
03rd July (Fri.)	10:15 10:30	CF2611 A Non-Wearable Image-Based Method for Detecting Peak Knee Loading during Running <i>Cheng-Hsiu Li</i>
	10:30 10:45	CF2612 An Automated Assistance Framework for House–Tree–Person Drawing Analysis Using YOLO-Based Object Detection and Artificial Intelligence <i>Chandra Siddharta, Wen-Chih Chang</i>
	10:45 11:00	CF2613 Integrating Vector Retrieval and Generative Artificial Intelligence for Robust Anti-Fraud Identification <i>Yi-Hung Liu, Yi-Chi Weng, Chun-Chia Huang, Sheng-Fong Chen</i>
	11:00 11:15	CF2615 Structural Mechanisms of Graph-Based Retrieval in Scholarly Information Services: An Explainable Bridge Task Evaluation <i>Chia-Ling Chang, Yi-Lung Lin</i>
	11:15 11:30	SCD2614 A Deep Learning-Based System for Cat Identification Using Coat Pattern Features and Similarity Measurement <i>Hsiao-Yueh Yu, Jia-Shing Sheu</i>
	11:30 11:45	CG2613 DES-Modified TiO₂ Supported with Non-Noble Metals for Enhanced Biomass Hydrogen Production in an Alkaline Thermal System <i>Po-Jui Liao, Pen-Chi Chiang, Feng-Chih Chou, Syu-Ruei Jhang, Cheng-Yu Lin, Yuan-Chung Lin</i>
	11:45 12:00	CG2615 Preparation and Optimization of Ni–Fe/UiO-66 Catalysts for Carbon Dioxide Methanation <i>Yu-Hsuan Lin, Feng-Chih Chou, Shang-Cyuan Chen, Way Lee Cheng, Yuan-Chung Lin</i>

Session B4 | Onsite Oral | Room B

Date	Time	A. Materials Engineering ; H. Industry 4.0 & Automation Engineering ; CF. Advances in Computational Material and Related Application <i>Session Chair: Chang-Sheng Lin ; Kuo-Pin Yu</i>
03rd July (Fri.)	08:30 08:45	CA2612 Electrochemical Performance and Kinetic Modeling of 3D Clay-Grown Carbon Nanotube Network in a Symmetric Sodium-Ion Supercapacitor <i>Hao-Lin Hsu, Ssu-Tzu Wang, Shuhn-Shyurng Hou</i>
	08:45 09:00	CA2613 Metal-Organic Framework Derived Selenides for Supercapacitors <i>Yu-Xuan Lai, Pei-Hsin Young</i>
	09:00 09:15	CA2615 Fabrication of 1T-MoS₂/Ni-Mo-Co Composite Micro-Electrodes by Electroplating and Their Cathodic Efficiency of Hydrogen Production in 1.0 M KOH <i>Jia-Xuan Xu, Jing-Chie Lin</i>
	09:15 09:30	CA2616 Sustainable Air Filtration Media from Post-Consumer Plastic Waste via High-Temperature Centrifugal Fiber-Drawing <i>Yi-Chi Yu, Kuo-Pin Yu</i>
	09:30 09:45	CH2611 Development of a Dual-Sphere Measurement Method to Overcome Probe Repeatability Errors in Location Errors Identification for Small Rotary Tables <i>Chieh Tsou, Yu-Ta Chen, Yu-Yang Huang, Yen-Han Chen, Fan-Hsi Hsu</i>
	09:45 10:00	SCF2611 Strength Simulation Analysis and Experimental Validation of a Polylactic Acid (PLA) Egg Storage Carton <i>Wen-Han Lin, Guan-Ting Chen, Chang-Sheng Lin</i>

Session B5 | Onsite Oral | Room B

Date	Time	J. Mechanical Engineering ; L. Environmental, Food, Health Science & Technology ; M. Innovation Management ; N. Intelligent Computing ; O. Other Engineering and Technology related topics <i>Session Chair: Melissa M Appleyard ; Shaligram Tiwari</i>
03rd July (Fri.)	10:15 10:30	CL2611 Religious Spatial Competition in the Urban Sacred: A GIS Analysis of Catholic Church Site Selection in Relation to Traditional Temples in Taipei <i>Chih-Wen Lan</i>
	10:30 10:45	CN2611 Integrating Virtual Reality and Ecological Sensing Technologies in Environmental Education: Effects on Ecological Literacy and Technology Acceptance <i>Yi-Lung Lin, Chia-Ling Chang, Wei-Lun Liang</i>
	10:45 11:00	CO2613 AI-Based Preservation of 3D Temple Sculptures Using Old Images <i>Naai-Jung Shih</i>
	11:00 11:15	CJ2614 Torque Enhancement of Savonius Turbine Using an Innovative Pivoted Blade Design <i>Mohanasaravanan P S, Jayavel S, Shaligram Tiwari</i>
	11:15 11:30	CJ2615 Analysis and Experimental Characterization of an Impact-Driven Magnetically Coupled Piezoelectric Energy Harvester <i>Yu-Wei Feng, Chung-De Chen</i>
	11:30 11:45	SCA2628 Photoluminescence Modification of Hydrothermally Derived Sr₃Al₂O₆-Based Multiphase Phosphors by Microwave-Assisted Treatments <i>Chien-Lin Chen, Yung-Wei Chen, Chen-Yu Wu, Tai-Cheng Chen, Horng-Yi Chang</i>
	11:45 12:00	CM2614 Navigating AI Deployment with a “Drift Compass”: How the Culture-Based Drift Compatibility Model (DCM) Captures Variation across Agentic Enterprises in Asia-Pacific, Europe, and North America <i>Meena Al-Azzawe, Kristi Yuthas, Melissa M Appleyard</i>

Session B6 | Onsite Oral | Room B

Date	Time	CE. Recent Advances in High Entropy Materials <i>Session Chair: Jason Shian-Ching Jang ; Wu Kai</i>
03rd July (Fri.)	13:30 13:45	SCE2611 The Evolution of Microstructure and Mechanical Properties of Ti-Rich Medium-Entropy Alloy with Ni Addition through Thermo-Mechanical Treatment <i>Po-Sung Chen, Han-Lin Tsai, Yao-Cheng Wang, Yen-Chun Wang, Jian-Rong Chen, Li-In Wang, Jason Shian-Ching Jang</i>
	13:45 14:00	SCE2612 Effect of Zr/V Ratio on the Evolution of Microstructure and Mechanical Properties of Lightweight TiAlCrZrV MEAs <i>Po-Sung Chen, Yu-Hsien Liao, Yao-Cheng Wang, Yen-Chun Wang, Jian-Rong Chen, Li-In Wang, Jason Shian-Ching Jang</i>
	14:00 14:15	SCE2614 Preliminary Study on the Incipient Oxidation Behavior of the Lightweight Refractory High-Entropy Alloy AlCrNbSiTi at 950 °C <i>Po-Wei Liu, Si-Han Zhang, Kuan-Che Lan, Kai-Wu</i>
	14:15 14:30	SCE2615 Microstructure and High-Temperature Oxidation Behavior of AlCrSiTi Lightweight Refractory Medium-Entropy Alloy at 950 °C in Dry Air <i>Cheng-Hua Tsai, Si-Han Zhang, Po-Wei Liu, Kuan-Che Lan, Wu Kai</i>
	14:30 14:45	SCE2616 Study the Oxidation of L12-Type Chemically Complex Intermetallic Alloys <i>Wu Kai, Ke-Chung Wu, Yung-Chen Chen, Wei-Lin Chen, Rong-Tan Huang, Wei-Bing Wang, Ji-Jung Kai</i>
	14:45 15:00	SCE2617 Exploring Functional Coatings with High Entropy Alloy Powders: Synthesis, Properties, and Performance <i>Shih-Hsun Chen, Tzu-Tang Lin, Chien-Chon Chen</i>
	15:00 15:15	SCE2618 Effects of Printing and Sintering Parameters on the Surface Morphology of DLP 3D-Printed AlCrFeNiSiY High-Entropy Alloys <i>Jui-Ting Liang, Chih-Chien Huang, Yi-Ta Wang</i>
	15:15 15:30	SCE2619 Highly Robust and Corrosion-Resistant Triboelectric Nanogenerators Enabled by Al_{0.5}CoCrFeNi₂Ti_{0.5} and Al_{0.5}CoCrFeNi₂ High Entropy Alloy <i>Kuan-Lin Liu, Shih-Hsun Chen, Ying-Hao Chu, Chih-Yen Chen</i>

Poster C4 | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
03 rd July (Fri.)	08:30 10:00	1	CE2614 Development of Anti-Biological Adhesion and Anti-Coagulation Polymer Coatings Applied to Irregular-Shaped Medical Catheters <i>Tsung-Tao Huang, Jheng-Fong Jhong, Yen-Pei Lu, Yi-Chen Huang</i>
		2	CE2615 Heparin and Polydopamine Functionalized Cotton Fibers for Enhanced Capture Efficiency of Exosomes and Biomarkers in Saliva Samples <i>Chun-Chiang Huang, Tsung-Tao Huang, Yu Hsiang Tang, Jun Sheng Wang, Hsieh-Chih Tsai</i>
		3	CG2611 Preparation and Properties of Halogen-Free Flame-Retardant Epoxy Composites Using Bio-Waste Tea Polyphenols <i>Ming-Yuan Shen, You-Sheng Zheng, Chin-Lung Chiang</i>
		4	CG2612 Numerical Study on Optimization of Closed-Loop Geothermal Heat Extraction System <i>Jr-Ming Miao, Chen-Yuan Wu, Chien-Hsing Chen, Chun-Fa Cheng</i>
		5	CL2612 Development of a ZnO-Modified Gel Electrolyte for Hydrogen Production via Alkaline Water Electrolysis <i>Yi-Li Lin, Nai-Yun Zheng, Chuan-Yi Leng</i>
		6	CL2613 Chemical Recycling of Waste Polylactic Acid into Rigid Polyurethane Foams via Alcoholysis-Derived Polyester Polyols <i>Po-Hsun Lin, Chiu-Ta Chang, Sung-Po Chen, Ching-Feng Chen</i>

Poster C4 (continued) | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
03 rd July (Fri.)	08:30 10:00	7	CO2614 Investigation of Characteristics and Recommendations for Quality Assurance Testing Specifications of Portal Radiation Monitors in the Steel Industry in Taiwan <i>Fang-Yuh Hsu, Chih-Chien Nieh</i>
		8	SCH2612 Management Effectiveness of Taiwan's Green Building Material Label in Achieving Red List-Free Interiors and Health Hazard Mitigation <i>Cheng-Chen Chen, Yen-I Lin, Shih-Chi Lo</i>
		9	CF2614 Trustworthy and Poisoning-Resistant Collaborative Learning via Blockchain-Based Certificate Management in Industrial CPS <i>Lo-Yao Yeh, Chia-Hsien Hung, Jyh-Horng Wu, Hsiu-Mei Chou, Jen-Wei Hu</i>
		10	CE2616 Innovative Design of the Precision Dynamic Pressure Relief Pillow <i>Chun-Ting Li, Yen-Nien Chen</i>
		11	CO2612 Simple Surface Profile Measurement Method Based on a Modified Dual-Wavelength Twyman-Green Interferometer <i>Yao-Yuan Chang, Siao-Yu Chang Jian, Chien-Hung Yeh, Jing-Heng Chen, Kun-Huang Chen</i>
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Poster C5 | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
03 rd July (Fri.)	10:15 12:00	1	CA2621 Integrated Simulation and Multi-Stage Forming Process for Precision Fabrication of SPHE Steel Automotive Internal Gear <i>Tung-Sheng Yang, Jing-Li Wang</i>
		2	CF2616 Comprehensive Prediction of Epigenetic Profiling across Drosophila Developmental Stages Using Deep Learning <i>Guan-Yi Zhou, Tzu-Hsien Yang</i>
		3	CF2618 Deep Learning-Based Acoustic Source Separation and Fault Diagnosis for Rotating Machinery in Noisy Environments <i>Yu-Jung Lee, Kuo-Ting Wang</i>
		4	CH2612 PatchCore-Based Surface Defect Anomaly Detection for Coarse-Ground SiC Wafers Using a Nominal Patch-Feature Memory Bank <i>Chih-Yung Huang, Pin-Chen Tsai, You-Sheng Xie</i>
		5	CN2612 An Incremental Deep Model-Based Replay Mechanism for Efficient Deep Reinforcement Learning <i>Yu-Jen Chen, Po-Hsien Su, Wei-Cheng Jiang</i>
		6	

Poster C5 (continued) | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
03 rd July (Fri.)	10:15 12:00	7	CO2615 Developing an Engine Maintenance Virtual Reality Training System for the Hot Section of PT6A Engine <i>Wen-Chung Wu, Chao-Shiang Chang</i>
		8	SCD2612 Attention-Enhanced Bivariate Convolutional Imaging Framework for Joint Spatial Classification and Regression of Urban Flood Patterns <i>Thuan Thanh Le, Tuong Quang Vo, Jongho Kim</i>
		9	CN2613 Immune-Algorithm-Based Self-Referential Prompt Evolution for Enhancing Reasoning Performance in LLMs <i>Ta-Cheng Chen, Yi-Xin Liu, Peng-Sheng You, Yi-Chih Hsieh</i>
		10	CB2611 A Digital-Twin Energy Consumption Prediction Model for Industrial Robotic Arm Optimized by Deep Learning <i>Jin-Siang Shaw, Yu-Kang Chang, Chun-Ying Lee</i>
		11	CB2612 Simulation Study on an Electromagnet-Driven Tensegrity-Based Vibratory Conveying Platform <i>Wen-Hsiang Hsieh, Chen-Ji Pan</i>
		12	CJ2623 Kinematics Verification of a Cam-Driven Tensegrity-Based Vibratory Conveying Platform <i>Wen-Hsiang Hsieh, Hukamasidhi Yoel</i>

Poster C6 | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
03 rd July (Fri.)	13:30 15:45	1	SCC2612 Development of an Anti-Interference Pre-Processing System for UAV-Based Gas Inspection Using Edge CNN and Multimodal Fusion <i>Chung-Chi Huang, Song-Yih Lin, Chung-Lin Huang, Feng-Chung Tsai</i>
		2	SCC2613 Physics-Informed Neural Networks (PINN) for Non-Linear Dynamic Compensation of Low-Cost Gas Sensor Arrays <i>Chung-Chi Huang, Song-Yih Lin, Chung-Lin Huang, Hsin-Heng Chen</i>
		3	SCC2614 3D Gas Distribution Mapping and Spatio-Temporal Alignment Using cGANs for UAV-Based Inspection <i>Chung-Chi Huang, Song-Yih Lin, Chung-Lin Huang, Pei-Yu Wang</i>
		4	SCC2615 RL-Optimized Energy-Proxy Models for Annual Emission Estimation and ISO 14064 Compliance via UAV Data <i>Chung-Chi Huang, Song-Yih Lin, Chung-Lin Huang, Jen Kang</i>
		5	SCC2616 Enhancing Spatial Precision and Temporal Efficiency in Embodied AI: A YOLO12-OpenVLA Framework with Digital Twin Validation <i>Chung-Chi Huang, Chung-Lin Huang, Tien-Yu Kuo</i>
		6	SCC2617 A Qualitative Study on the Transformative Learning Process and Reconstruction of Life Meaning among Seniors in University-Based Programs <i>Hsiao-Man Liu, Chung-Chi Huang, Chung-Lin Huang</i>

Poster C6 (continued) | Onsite Poster | Foyer 25F

Date	Time	No.	Session Chair: Tz-Yun Chen
03 rd July (Fri.)	13:30 15:45	7	SCC2618 Development of the IoT-Based Smart Algae Cultivation System with Automated Alert and Internet Crawler Functions <i>Jeng-Han Li, Ching-Ni Yang, Yu-Ting Chen, Chung-Chi Huang</i>
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July 04
Day 3

Session D1 | Online Oral | Zoom

Date	Time	CB. Recent Innovations in Sensors ; C. Electrical & Electronic Engineering ; F. Computer & Information Engineering ; O. Other Engineering and Technology related topics <i>Session Chair: Han-Hsi Ho</i>
04 th July (Sat.)	09:00 09:15	CC2615 Design of K-Means-CEA-MS-SCA Fault Diagnostic Model for Solar Photovoltaic System <i>Yan-Ting Yang, Rong-Jong Wai</i>
	09:15 09:30	CF2617 Functional Resonance Analysis Method with a Weighted Resilience Matrix for Large-Scale System <i>Masakazu Takahashi, Aoi Konagaya, Yoshimichi Watanabe</i>
	09:30 09:45	CF2619 A Holistic Framework for Bitcoin Trust Identification: Combining Dimensionality Reduction and Hybrid Voting K-Means with a Dual-Stage IG-Filter and Wrapper-Based SVM Classification Model <i>Narongsak Chayangkoon, Chatchai Kasemtaweechok</i>
	09:45 10:00	CO2611 Lambertian and Batwing LED Lamps Integrated with Architectural Features for Visual Comfort and Energy Efficiency in Small Offices—A Case Study <i>Samaneh Aghajari, Cheng-Chen Chen</i>
	10:00 10:15	SCA2613 Agentic AI as a Stakeholder of Multidisciplinary Engineering and Construction Projects: A Novel Assessment Framework <i>Han-Hsi Ho</i>
	10:15 10:30	SCB2612 Home Care Event Detection Based on Transformer Combined with Knowledge Graphs <i>Jui-Feng Yeh, Chun-Yu Tsai, Bo-Sung Huang, Po-Hsiang Yang, Chen-Yu Yeh</i>
	10:30 10:45	SCB2614 Enhancing Tool Wear Prediction through Acoustic Noise Reduction and Multi Sensor Data Fusion <i>Jian-Wen Chen, Meng-Shiun Tsai, Che-Lun Hung</i>
	10:45 11:00	

Date	Time	No.	
04 th July (Sat.)	09:00 11:00	1	CL2614 Influence of Pretreatment Methods on Metal Recovery from Spent Lithium-Ion Batteries <i>Yu-Fong Huang, Pei-Te Chiueh, Shang-Lien Lo</i>
		2	CH2613 Autonomous Mobile Robots for Smart Warehouse Logistics Optimization <i>Wai-Yie Leong</i>
		3	CL2615 Green Computing Strategies for Energy-Efficient Data Centers in Sustainable Digital Infrastructure <i>Wai-Yie Leong</i>
		4	SCF2616 Programmable Matter and Smart Materials for Adaptive Engineering Structures <i>Wai-Yie Leong</i>
		5	CN2615 Real-Time IoT Anomaly Detection for Smartphone Charging Safety <i>Xin-Kai Wang, Yu-Ting Cheng, Chen-Hao Wang, Shih-Chieh Huang, Chung-He Chen, Jia-Ming Liang, Jen-Jee Chen</i>
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