

Session A1

10/19 14:30-16:00 (E0502), Chair Prof. Nai-Shang Liou

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|------------------------|--|
| A-I-002 | | E0502 A1 | Anupun Terdwongworakul | Application of near infrared spectroscopy for quality evaluation of some tropical agricultural produces |
| A-I-001 | | E0502 A1 | Tetsuya Inagaki | NIR-HSI evaluation of wood and fruits |
| A-O-002 | 1-1-001 | E0502 A1 | Manikandan Rajendran | Enhancing Physical Properties of ITO/Ag/ITO and AZO/Ag/AZO Transparent Conducting Electrodes Using 532nm Green Laser Annealing |
| A-O-003 | 1-1-002 | E0502 A1 | Victoria A. Williams | SCADA for Predictive Modeling for Wind Turbines |
| A-O-004 | 1-1-003 | E0502 A1 | Bobby Pranajaya | Failure investigation of AISI 314 stainless steel wire mesh conveyor belt after service in a carburizing atmosphere in a continuous heat treatment furnace |
| A-O-005 | 1-1-005 | E0502 A1 | Stephen J. Francis | Predicting Wind Turbines Power Output Using SCADA Data |

Session A2

10/19 16:30-18:00 (E0502), Chair Prof. Yu-Sheng Lin

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|----------------|--|
| A-O-001 | | E0502 A2 | Shuichi Torii | Numerical and Experimental study on Combustion Characteristics in New Compact Combustor |
| A-O-006 | 1-1-007 | E0502 A2 | Ting-Yao Lu | Development of An Novel Cloth Drying Technology by Ultrasonic Piezoelectric Transducer |
| A-O-007 | 1-1-008 | E0502 A2 | Yu-Hsiang Lin | Design and Development of Standing Wave Type of Piezoelectric Linear Motor Manufacturing by 3D Fused Deposition Modeling Process |
| A-O-008 | 1-1-010 | E0502 A2 | Yung-Lin Tsai | Analysis of Original and Retouched Images Utilizing Facial Recognition Systems |
| A-O-009 | 1-3-001 | E0502 A2 | J. J. Kang | Using Binocular Stereo Vision System for Displacement Measurement with ZNSSD Correlation Algorithm |
| A-O-010 | 1-3-003 | E0502 A2 | Song-Ye She | Flexible Capacitive Sensor with Graphene Sponge Dielectric Layer for Pressure Sensing Applications |
| A-O-011 | 1-3-007 | E0502 A2 | Kosuke Okazaki | Evaluation of Thermal Spray Coating Thickness of Thermally Affected Steel Pipes Using Eddy Current Testing |

Session A3

10/20 09:00-10:00 (E0502), Chair Prof. Yu-Jen Hsiao

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|----------------|---|
| A-O-012 | 1-3-009 | E0502 A3 | Shohei Iwasa | Evaluation of Magnetic Response from Metal Layered Structure for Detection of Li-ion Batteries in Small Home Appliances |
| A-O-013 | 1-3-010 | E0502 A3 | Jin-Cheng Guo | Application on Internet of Things to Traditional Aquaculture |
| A-O-014 | 1-3-011 | E0502 A3 | Yao-Lin Zhang | Image-based Classification and Analysis of Hospital Dishes for Nutritional Monitoring and Personalized Care |
| A-O-015 | 1-3-013 | E0502 A3 | Guan-Wei Huang | Intelligent warehouse system: image detection and robotic arms on embedded systems |
| A-O-016 | 1-3-014 | E0502 A3 | Chun-Po Lin | Development of an Antimicrobial Surgical Light for Aerosol Control |

Session A4

10/20 10:20-11:20 (E0502), Chair Prof. Tzu-Yao Tai

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|-----------------|--|
| A-O-017 | 1-4-001 | E0502 A4 | Jie-Ru Liao | Design of Gait Trainer with Body Weight Support |
| A-O-018 | 1-4-004 | E0502 A4 | Yu-Chun Chang | Enhancing Yaw Moment Control through Active Front Steering Restriction during Emergency Lane Changes |
| A-O-019 | 1-5-008 | E0502 A4 | W.Y. Chung | Investigation on film stress for coated flexible Substrate |
| A-O-020 | 1-5-010 | E0502 A4 | Z. X. Huang | Damage Analysis of the Thin Film base on the Vibration Frequency |
| A-O-021 | 1-5-013 | E0502 A4 | Huang Lung Tsai | Investigation on out-of-plane displacement measurement of photomask protective film |

Session B1

10/19 14:30-15:10 (E0503), Chair Prof. Jiun-Yu Tu

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|---------------------|--|
| B-I-001 | | E0503 B1 | V. Parthasarathy | Camellia-IDrone: An Intelligent Automatic System for the Pest Infestation Assessment |
| B-I-002 | | E0503 B1 | Aripriharta | Hello World: A Frog Metamorphosis Algorithm and its Possible Applications |

10/19 15:10-16:00 (E0503), Chair Prof. Dong-Shing Wu

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|---------|--|-------------|------------------|---|
| B-I-003 | | E0503 B1 | Pei-Wei Tsai | Applying Machine Learning in Supply-chain Management |
| B-I-004 | | E0503 B1 | Chao-Yang Lee | Involvement of Deep Learning for Vision Sensor-based Autonomous Driving Vehicle |

Session B2

10/19 16:30-18:00 (E0503), Chair Prof. Po-Ming Lee

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|------------------------|---|
| B-I-005 | | E0503 B2 | Ming-Der Shieh | Domain Adaptation Using Soft Decisions for Efficient Semantic Segmentation of 3D Point Clouds |
| B-I-007 | | E0503 B2 | Sivaperumal Sampath | A Comprehensive Review on Space Debris and Asteroids Detection |
| B-I-006 | | E0503 B2 | T. Rameshkumar | Future of Electric vehicles and Energy storage systems |

Session B3

10/20 09:00-10:00 (E0503), Chair Prof. Tz-Heng Hsu

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|---------------------|---|
| B-O-001 | 2-5-001 | E0503 B3 | Therese J. Bolabola | Exploring Keyword Extraction for Topic and Document Similarity Assessment in Enhancing Plagiarism Detection |
| B-O-002 | 2-5-003 | E0503 B3 | Stefan Graham | Unmasking Trash: Empowering Automated Object Recognition with Internet Intelligence |
| B-O-003 | 2-7-001 | E0503 B3 | Yipu Wang | Eco-Industrial Networks in Original Reference System with Cooling Input and Peak Demand Optimization by Simulated Annealing with Linear Programming |
| B-O-006 | 2-2-006 | E0503 B3 | Bo-Chen Wang | Using vibrating devices to improve image recognition |
| B-O-007 | 2-3-004 | E0503 B3 | Jia-Ming Liou | Solar-Powered Wireless Charging Device with Maximum Power Point Tracking Capability |

Session B4

10/20 10:20-11:20 (E0503), Chair Prof. Tz-Heng Hsu

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|------------------------|---|
| B-O-004 | 2-5-002 | E0504 B4 | Jay Vince D. Serato | Development and Utilization of AI-Enabled Automatic Programming Problem Generator Using the CodeRunner Plugin of Moodle |
| B-O-005 | | E0504 B4 | Jung-Lin Yang | Empowering Struggling Students in Advanced Programming: An Intensive Summer Course Case Study |
| B-O-008 | | E0504 B4 | Jun Albert S. Pardillo | EduGPT: An Exploration on AI Agents for Assisting Educators in Course Outline Creation |

Session C1

10/19 14:30-15:00 (E0504), Chair Prof. Jeng-Han Li

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|-----------------|---|
| C-I-006 | | E504 C1 | Shyh-Jier Huang | Investigation of Bio-Inspired Intelligence for Sustainable Technology |

10/19 15:00-16:00 (E0504), Chair Prof. Chun-Tang Chao

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|---------------------------|--|
| C-I-004 | | E504 C1 | Cherry Lyn Sta. Romana | Integrating Adaptive Learning in CodeChum for Personalized Programming Education |
| C-I-005 | | E504 C1 | Chris Jordan G. Aliac | Transforming Medical Scans into 3D Printable Objects: An Automated |

Session C2

10/19 16:30-17:00 (E0504), Chair Prof. Chih-Cheng Kao

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|------------|--|
| C-I-001 | | E504 C2 | Zu-Po Yang | The Applications of Localized Surface Plasmon and Perovskite Nanocrystals on the Spectral Tuning of Light-Emitting Electrochemical Cells |

10/19 17:00-18:00 (E0504), Chair Prof. Zu-Po Yang

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|---------------------|--|
| C-O-001 | 3-5-001 | E504 C2 | Kai-Sheng Hsiao | Dual-function Electrochromic Smart Window Based on PEDOT:PSS /Graphene/ CsWO ₃ for Transmittance Modulation and Near Infrared Shielding |
| C-O-002 | 3-6-007 | E504 C2 | Hsiang-Chun Chan | The Influence of Thermal Effect on Mechanical Properties of Ion-Assisted Evaporation Tungsten Oxide Thin Films |

Session C3

10/20 09:00-10:00 (E0504), Chair Prof. Ching-Ming Hsu

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|--------------|---|
| C-I-002 | | E504 C3 | Shuzi Hayase | Tin-Based Perovskite Solar Cells and Application to All-Perovskite Tandem Solar Cells |
| C-I-003 | | E504 C3 | Tatsuo Mori | Study on Carrier Behavior in 4CzIPN-based TADF-OLEDs |

Session D1

10/19 14:30-15:00 (E0505), Chair Prof. Hui Suan Ng

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|---------------|---|
| D-I-003 | | E505 D1 | Yu-Shen Cheng | Insect Biorefinery: An Alternative Potential Way for Circular BioEconomy and Achieving Net-Zero Emissions |

10/19 15:00-16:00 (E0505), Chair Prof. Yu-Shen Cheng

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|---------------------|--|
| D-I-004 | | E505 D2 | Hui Suan Ng (Grace) | Insect Biorefinery: A circular economy approach for functional protein production |
| D-I-005 | | E505 D2 | Joo Shun Tan | Postbiotics: a new paradigm in microbial therapy with focus on antimicrobial potential from lactic acid bacteria |

Session D2

10/19 16:30-18:00 (E0505), Chair Prof. Hui Suan Ng

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|---------------|---|
| D-O-004 | 4-6-003 | E505 D2 | Wei-Cheng Lin | Inhibition Activity of α -Glucosidase and Antioxidant Activity of Chinese Noodles Supplemented with <i>Spirulina platensis</i> |
| D-O-005 | 4-4-002 | E505 D2 | Hsiao-Yu Hsu | Development of microalgae oil delivery carriers for curcumins |

Session D3

10/20 09:00-10:00 (E0505), Chair Prof. Ying-Nien Chou

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|------------------|---|
| D-I-001 | | E505 D3 | Toshihiro Moriga | Slow photon photocatalytic enhancement of H ₂ production in TaON inverse opal photonic crystals |
| D-I-002 | | E505 D3 | Chung-Wei Kung | Stable and Electrochemically "Inactive" Metal–Organic Frameworks for Modulating the Selectivity of Electrocatalytic Reactions |

Session D4

10/20 10:20-11:20 (E0505), Chair Prof. Ying-Nien Chou

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|-----------------|--|
| D-O-001 | 4-1-006 | E505 D4 | Xiao-Han Huang | Preparation and Characteristics of the CO ₂ Based Copolymers |
| D-O-002 | 4-2-006 | E505 D4 | Kuan-Yu Tu | Self-Healing and Highly Stretchable Electronic Skins for Soft Robots |
| D-O-003 | 4-2-009 | E505 D4 | Zih-Cyuan Huang | Using zwitterionic solid-state polymer electrolyte to improve the performance of lithium metal batteries |

Session E

10/19 14:30-16:00 (E0407), Chair Prof. Yi-Chu Hsu

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|--------------|----------------|---|
| E-O-001 | 5-1-001 | E0407 E | Yi-Chu Hsu | Action Research on Applying Designing Your Life for Purpose Development: A Case Study on Creative thinking Course in a Department of Mechanical Engineering |
| E-O-005 | | E0407 E | Yu-Sheng Lin | Enhancing Learning Outcomes in "Introduction to Nano-Technology" Using a Game-Based Instruction |
| E-O-003 | 5-3-003 | E0407 E | Yu Jen Chen | USR Project Promoting Talent Development in the Engineering Field - Using Tu-Cheng Fish Farms as a Sustainable Zero-Emission Demonstration Site |
| E-O-004 | 5-7-001 | E0407 E | Jung-Lin Yang | Discovering the Wonders of AI: A Two-Day Exploration Curriculum for Elementary Students in USR Course |
| E-O-002 | 5-1-002 | E0407 E | Shih-Fang Chen | The Teaching Study of the "Product Design" concept in the practical course of microcontrollers |

Session C2-1

10/19 16:30-18:00 (E0407), Chair Prof. Chi-Jo Wang

| Oral No. | Paper No. | Room Session | Presenter | Title |
|----------|-----------|---------------|---------------|---|
| C-O-004 | 3-2-009 | E0407 C2-1 | Po-Chang Chen | Recognition and Assistant Control System for Road Conditions |
| C-O-005 | 3-2-010 | E0407 C2-1 | Yu-Heng Chen | The Application of Image Recognition Technology developed for Autonomous Convenience Stores |
| C-O-006 | 3-2-011 | E0407 C2-1 | Hao Su | Automatic Ball Launching Machine based on Human Pose Estimation |
| C-O-007 | 3-2-012 | E0407 C2-1 | Jin-Yu Syue | The Use of Unmodified Wax Material in FFF 3D-printer |