Conference Agenda

Day 1 – Sept. 2, 2026

8:30 am	Registration – Location: Main Lobby
9:00 am	Welcome Address by Cho-Pei Jiang
	Keynote Presentations – 1 *Chair: Cho-Pei Jiang*
9:15 am	**Keynote Presentation 1: Coupled composition-microstructure design enables strong and ductile titanium-oxygen-iron alloys** *Speaker: Ma Qian, The Royal Melbourne Institute of Technology, Australia*
9:45 am	**Keynote Presentation 2: An Integrated Framework for Reliable Additive Manufacturing of Ti-6Al-4V: Bridging the gap between powder feedstock characteristics and bed formation with LPBF part performance** *Speaker: Mahdi Habibnejad, General Electric Additive-AP&C, Canada*
10:15 am	**Coffee Break** – Location: Main Lobby
	Presentation Session 1 *Chair: Jung-Ting Tsai*
10:35 am	**Invited Talk 1: Digital Light Processing as a Route to Metal and Metal/Ceramic Multi-Material Structures** *Speaker: Chang Woo Gal, Korea Institute of Materials Science, South Korea*
10:55 am	**Presentation 1: Determination of Material Specific Humping Thresholds in High Speed Laser Welding of SUS316S Thin Sheets** *Speaker: Chen-Wei Chao, National Kaohsiung University of Science and Technology, Taiwan*
11:10 am	**Presentation 2: Laser Power Modulation for Spatter Suppression and Enhanced Porosity in Wobble-Based LPBF Lattice Structures** *Speaker: Chung-Wei Cheng, National Yang Ming Chiao Tung University, Taiwan*
11:25 am	**Presentation 3: Numerical Simulation of Molten Pool Dynamics and Surface Roughness Formation Mechanisms** *Speaker: Hsiao-Chen Cho, National Kaohsiung University of Science and Technology, Taiwan*
11:40 am	**Presentation 4: Influence of LPBF Process Parameters on the Surface Integrity of Nickel-Based Superalloys** *Speaker: Lucie Hlavůňková, Czech Technical University, Czech Republic*
11:55 am	**Presentation 5: Development of a Computational Fluid Dynamics Model for Cyclone Filter Design in Laser Powder Bed Fusion Process** *Speaker: Kamasani Reddappa Reddy, National Taipei University of Technology, Taiwan*
12:10 pm	**Lunch Break** – Location: Main Lobby
	Presentation Session 2 *Chair: Chinmai Bhat*
1:10 pm	**Invited Talk 2: Addressing unmet clinical needs with near-field microwave 3D printing** *Speaker: Yong Lin Kong, Rice University, United States of America*
1:30 pm	**Presentation 6: Comparison of MIM and MBJ Processing of 17-4 PH Stainless Steel: Correlation with Powder Type and Microstructure** *Speaker: Yi-Fei Sung, National Taiwan University of Science and Technology, Taiwan*
1:45 pm	**Presentation 7: Towards productive laser powder bed fusion of 17-4 PH steel: parameter study at 80 µm layer thickness** *Speaker: Šimon Petrášek, Czech Technical University in Prague, Czech Republic*

2:00 pm	**Presentation 8: An open source toolbox for fracture-surface analysis** *Speaker: Wojciech Macek, Gdańsk University of Technology, Poland*
2:15 pm	**Presentation 9: Fatigue crack growth and fracture toughness of LPBF Al-Si-Mg alloy** *Speaker: Sabyasachi Dey, Indian Institute of Technology (Banaras Hindu University), India*
2:30 pm	**Presentation 10: Fabrication of crack-free 6061 aluminum alloy by incorporating Niobium Interlayer in Laser Foil Printing Additive Manufacturing** *Speaker: Ju-Han Chung, National Cheng Kung University, Taiwan*
2:45 pm	**Presentation 11: $CuMn_2O_4$ Electrode Synthesized via Ball-Milling and Calcination of Ag-Coated Cu/MnO_2 Powders for Metal–Air Batteries and Supercapacitors** *Speaker: Chih-Hao Yang, National Pingtung University of Science and Technology, Taiwan*
3:00 pm	**Coffee Break** – Location: Main Lobby
	Presentation Session 3 *Chair: Yo-Lun Yang*
3:20 pm	**Invited Talk 3: Sustainable Additive Manufacturing and Circular Economy: Recycling Agricultural Waste into High-Performance Biochar Composite Materials Using Artificial Intelligence** *Speaker: Arumugaprabu Veerasimman, Kalasalingam Academy of Research and Education, India*
3:40 pm	**Presentation 12: Influence of Unimodal and Bimodal Particle-Size Distributions of Iron-Nickel Oxide Powders on Microstructure Evolution and Frequency-Dependent Electromagnetic Performance of Magnetic Cores** *Speaker: Chen-Rui Liu, National Taiwan University, Taiwan*
3:55 pm	**Presentation 13: Composite hydrogel with hydroxyapatite nanoparticles as osteogenic filling for porous bone implants** *Speaker: Michał Wojasiński, Warsaw University of Technology, Poland*
4:10 pm	**Presentation 14: Nitrogen-Engineered Porous Core–Shell Ti–TiN Composites for Enhanced Tribological Performance** *Speaker: Tsugumi Ono, The University of Osaka, Japan*
4:25 pm	**Presentation 15: Influence of Inclined Deposition on the Tensile Properties and Microstructure of WAAM SS316L** *Speaker: Vishwanatha H. M., Manipal Institute of Technology, Manipal Academy of Higher Education, India*
4:40 pm	**Presentation 16: Powder Characterization, Rheological, and Curing Depth Analysis of Alumina-Zirconia Composite Slurry for Ceramic Additive Manufacturing** *Speaker: Nandita Roy, Manipal Institute of Technology, India*
4:55 pm	**Coffee Break** – Location: Main Lobby
	Presentation Session 4 *Chair: Chia-Hung Hung*
5:15 pm	**Presentation 17: Formulation and Optimization of Aluminium Nitride Photocurable Slurry for DLP-Based Ceramic Additive Manufacturing** *Speaker: Ramteja Saragandla, National Taipei University of Technology, Taiwan*
5:30 pm	**Presentation 18: Low-Reflectivity Core-Shell Composite Powder for Low-Power Laser Sinter-Based Additive Manufacturing of 17-4 PH Stainless Steel** *Speaker: Kuan Ting She, National Taiwan University of Science and Technology, Taiwan*
5:45 pm	**Presentation 19: Hybrid Solid-Liquid Architected Lattices for Enhanced Energy Dissipation: A Bio-Inspired Concentric Design Approach** *Speaker: Seto Agung Riyanto, National Taipei University of Technology, Taiwan*

6:00 pm **Presentation 20: Breaking the Strength-Ductility Trade-Off in SiC-Reinforced Metal Matrix Composites via Nacre-Inspired Multi-Material Laser Powder Bed Fusion**
Speaker: Yi-Cheng Lee, National Tsing Hua University, Taiwan

6:15 pm **Presentation 21: Research of Image-oriented Binder Jetting inkjet area analysis and ink compensation**
Speaker: Wan-Ling Tseng, Tamkang University, Taiwan

Day 2 – Sept. 3, 2026

	Keynote Presentations – 2 *Chair: Jeng-Ywan Jeng*
9:00 am	**Keynote Presentation 3: Development of High-strength and toughness Commercial Aerospace Ti alloys for Additive Manufacturing** *Speaker: Aijun Huang, Monash University, Australia*
9:30 am	**Keynote Presentation 4: In Space Manufacturing: Challenges, Opportunities, and Current Research Trends** *Speaker: Aditya Thakur, Technical University of Braunschweig, Germany*
10:00 am	**Coffee Break** – Location: Main Lobby
	Session 5 *Chair: Hong Chuong Tran*
10:20 am	**Invited Talk 4: Insights into Texture Formation in Additively Manufactured Ti-Nb Alloys via Large Volume 3D EBSD** *Speaker: Shao-Pu Tsai, National Taiwan University, Taiwan*
10:40 am	**Presentation 22: Solute and Particle-Driven Microstructural Control and Its Impact on the Machinability of 3D-Printed Ti-6Al-4V** *Speaker: Chi-Ho Ng, Tohoku University, Japan and The University of Queensland, Australia*
10:55 am	**Presentation 23: Effect of Ti and V Additions on the Microstructural Evolution of Mechanically Alloyed CoCrFeNi-Based High-Entropy Alloys** *Speaker: Chun-Liang Chen, National Dong Hwa University, Taiwan*
11:10 am	**Presentation 24: The Current Development Status of Titanium and Titanium Alloy Powder Forming Technology in the Greater China Region** *Speaker: Yau-Hung Chiou, You Need Technology Consulting Co., Ltd., Taiwan*
11:25 am	**Presentation 25: Synchrotron and neutron diffraction study on microstructural evolution in additively manufactured α + β titanium alloys** *Speaker: Kenta Yamanaka, Tohoku University, Japan*
11:40 am	**Presentation 26: Processing and Investigation of Less Explored Laser Powder Bed Fusion BT3-1 Titanium Alloy for Aeroengine Applications** *Speaker: Mallikarjuna B, National Institute of Technology Tiruchirappalli, India*
12:00 pm	**Lunch Break** – Location: Main Lobby
	Session 6 *Chair: Mayur Jiyalal Prajapati*
12:55 pm	**Presentation 27: Developing Lightweight RHEA Composites with Alumina Reinforcement for High-Temperature Applications** *Speaker: Che-Wei Tsai, National Tsing Hua University, Taiwan*
1:10 pm	**Presentation 28: Multi-Physics Modeling of Laser Powder Bed Fusion and Advanced Laser Materials Processing** *Speaker: Hong Chuong Tran, National Taipei University of Technology, Taiwan*
1:25 pm	**Presentation 29: Unlocking Additive Manufacturing Potential: Particle Size and Morphology as Key Drivers in Digital Light Process** *Speaker: Jung-Ting Tsai, National Taiwan University of Science and Technology, Taiwan*
1:40 pm	**Presentation 30: Comparative Patent Analysis of Porite MIM and Fe-49Co-2V Permendur in Quantum Materials Applications** *Speaker: Jin Cheng Tsai, National Taipei University, Taiwan*
1:55 pm	**Presentation 31: Iron: Tailoring Variant Selection and Texture in Additively Manufactured Titanium Alloys**

	Speaker: Shenglu Lu, The Royal Melbourne Institute of Technology, Australia
2:10 pm	**Presentation 32: Effect of Directional Thermal Behavior on the Anisotropic Properties of Inconel 625 Fabricated by Laser Foil Printing** *Speaker: Po-Han Huang, National Cheng Kung University, Taiwan*
2:25 pm	**Presentation 33: Layer-Dependent Thermal Non-Uniformity and Microstructural Variation of NiCuZn Ferrite during Box-Type Furnace Sintering** *Speaker: Po-Chun Chiu, National Taiwan University, Taiwan*
2:40 pm	**Presentation 34: Investigations on Rotating Compression of Porous Cylinder with Constant Shear Friction** *Speaker: Gow-Yi Tzou, Minghsin University of Science and Technology, Taiwan*
2:55 pm	**Coffee Break** – Location: Main Lobby
	Session 7 *Chair: Arumugaprabu Veerasimman*
3:15 pm	**Invited Talk 5: Corrosion studies on 316 SS B_4C composite prepared through powder metallurgy** *Speaker: Uthayakumar Marimuthu, Amrita Vishwa Vidyapeetham, India*
3:35 pm	**Presentation 35: FEM Simulation on Rotating Compression of Porous Ring with Constant Shear Friction** *Speaker: Hsiang-Yu Teng, Cheng Shiu University, Taiwan*
3:50 pm	**Presentation 36: Functional Characterization of Machined Ductile Iron Surfaces Based on Multimodal Topography Measurements and Fractal-Volume Analysis** *Speaker: Krzysztof Żak, Opole University of Technology, Poland*
4:05 pm	**Presentation 37: A study on topology optimization for additive manufacturing with overhang constraints** *Speaker: Shuya Onodera, The University of Tokyo, Japan*
4:20 pm	**Presentation 38: Image-Based Geometric Measurement of Complex 3D-Printed Structures from Top-View Images** *Speaker: Laras Prasetyo Adhi, National Taipei University of Technology, Taiwan*
4:30 pm	**Presentation 39: Quantifying α-Ti grain rotation in tensile deformation by in situ neutron diffraction** *Speaker: Peng Cao, University of Auckland, New Zealand*
6:00 pm	**Gala Dinner** – Location: Organic Yam, No. 181號, Section 1, Jianguo S Rd, Minhui Village, Da'an District, Taipei City, 106

Day 3 – Sept. 4, 2026

	Keynote Presentations – 3 *Chair: Prof. Jung-Ting Tsai*
9:00 am	**Keynote Presentation 5: New design opportunities through solid-state processing of low-cost titanium powder and particulate** *Speaker: Martin Jackson, The University of Sheffield, UK*
9:30 am	**Keynote Presentation 6: Ti Alloys with Bone-Like Modulus: Machine Learning, Design Principle, and 3D Printing** *Speaker: Hung-Wei (Homer) Yen, National Taiwan University, Taiwan*
10:00 am	**Coffee Break** – Location: Main Lobby
	Session 8 *Chair: Che-Wei Tsai*
10:20 am	**Invited Talk 6: Advances in Multi-Material Metal Laser Powder Bed Fusion through Interface Engineering and Process Optimization** *Speaker: Yuan-Hui Chueh, National Taiwan University, Taiwan*
10:40 am	**Presentation 40: Lithography-Based Metal Manufacturing of Titanium Enabling Technical Applications** *Speaker: Lisa Sinawehl, Incus GmbH, Austria*
10:55 am	**Presentation 41: Development of High-Strength 3D-Printing Aluminum Alloys: from In-Situ Synthesis to Ex-Situ Addition** *Speaker: Che-Nan Kuo, National Sun Yat-Sen University, Taiwan*
11:10 am	**Presentation 42: Influence of Grayscale Printing Strategies on the Dimensional Accuracy and Shape Stability of Binder Jetting Sand Molds** *Speaker: Ping-Yu Chan, Tamkang University, Taiwan*