

Conference Agenda

Day 1 – Sept. 2, 2026

8:30 am Registration – Location: Main Lobby

9:00 am Welcome Address by Cho-Pei Jiang

Keynote Session – 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, RMIT University, 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 in Prague, 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, USA

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 (BHU) Varanasi, 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: CuMn₂O₄ Electrode Synthesized via Ball-Milling and Calcination of Ag-Coated Cu/MnO₂ 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, Manipal Academy of Higher Education, 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 Session – 2

Chair: Jung-Ting Tsai

- 9:00 am **Keynote Presentation 3: 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 4: 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 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 $\alpha + \beta$ 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, RMIT University, 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 B₄C 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, National Pingtung University of Science and Technology, 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
- 4:35 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 Session – 3

Chair: Prof. Jeng-Ywan Jeng

- 9:00 am **Keynote Presentation 5: Development of High-strength and toughness Commercial Aerospace Ti alloys for Additive Manufacturing**
Speaker: Aijun Huang, Monash University, Australia
- 9:30 am **Keynote Presentation 6: In Space Manufacturing: Challenges, Opportunities, and Current Research Trends**
Speaker: Aditya Thakur, Technische Universität Braunschweig, Germany
- 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