

OS12: Complex Thermofluid System

November 6, 2023

EX-4-B

- OS12-1 **Calculation of the Thermofluid Fields and Process Progress in the Kiln for MLCC Manufacturing (*Invited*)**
14:10-14:40 Yu-Hsien Cheng, Dean Chou, Chien-Chou Tseng, Tian-Shiang Yang (National Cheng Kung University, Taiwan)
- OS12-2 **The Numerical Approach of Rayleigh–Bénard Convection by Physics Informed Neural Network**
14:40-15:00 Hua-Ching Chang, Mei-Yu Chang, Wei-Hsiang Wang (National Chung Hsing University, Taiwan)
- OS12-3 **Application of CFD for Pressure and Velocity Simulation and Aerodynamic Noise Prediction in Dental Air-Turbine Handpieces**
15:00-15:20 Chung-Gang Li, Chi-Chou Lu (National Cheng Kung University, Taiwan), Tomomi Yamada (Osaka University, Japan), Kazunori Nozaki (Osaka University Dental Hospital, Japan)
- OS12-4 **High-Resolution Reynolds Stress Measurement using Single-Pixel Ensemble-Averaged PIV**
15:20-15:40 Tse Fu Chang, Kim Boom Lua (National Yang Ming Chiao Tung University, Taiwan)
- OS12-5 **A Numerical Investigation Of Microtube Length Effect On Convective Boiling**
15:50-16:15 Ying Wang, Cheng-En Li, Zong-You Chen, Shung-Han Pai, Chia-Wei Lin, Hua-Yi Hsu (National Taipei University of Technology, Taiwan), Yu-Chen Lin (National Chung Cheng University, Taiwan)
- OS12-6 **An Artificial Neural Network Model for Predicting Hydraulic Diameters in Pillow-Plate Heat Exchangers**
16:15-16:30 Amirhossein Sabourishirazi, Maryam Ghodrat, Jong-Leng Liow (University of New South Wales, Australia)
- OS12-7 **Helical Wires for Enhancing Pool Boiling Heat Transfer**
16:30-16:45 Chen-Kuang Wang, You-De Ren, Ching-Wen Lo (National Chung Hsing University, Taiwan)
- OS12-8 **Numerical Simulation of Magnetohydrodynamic Thermal Convection within a Rotating Spherical Shell under the Influence of Axial Gravitational Field.**
16:45-17:00 Hidemoto Satake, Toshio Tagawa (Tokyo Metropolitan University, Japan)
- OS12-9 **Impact of Random 3D Roughness on Natural Convection along a Vertical Plate in Unsteady Flow**
17:00-17:15 Tse-Yu Chen, Chung-Gung Li (National Cheng Kung University, Taiwan)
- OS12-10 **Formation of Crosslinked Microparticles from Coaxial Capillary with Different Gas Flowrates**
17:30-17:50 Zhen-Kai Yu, Jin-Jia Hu, Chia-Hung Dylan Tsai (National Yang Ming Chiao Tung University, Taiwan)

- OS12-11 **The Aerodynamic Effects of Phase Angle on the Tandem Flapping Wings of Damselfly**
17:50-18:05 Yuan Hung Wu, Kim Boon Lua (National Yang Ming Chiao Tung University, Taiwan)
- OS12-12 **Continuous Separation of Glutathione in Microfluidic System**
18:05-18:20 Yu-Ru Tseng (National Chung Hsing University, Taiwan), Ya-Yu Chiang (National Chung Hsing University / National Taiwan University, Taiwan)
- OS12-13 **Experimental Study of Azimuthal Magnetic Field Stability of Confined Immiscible Ferrofluid**
18:20-18:35 Avdhesh Kumar, Shih-Wei Hung, Ching-Yao Chen (National Yang Ming Chiao Tung University, Taiwan)
- OS12-14 **Determination of Ozone Density in Surface Micro-discharge in the Presence of Water Vapor**
18:35-18:55 Sin-Rong Zou, Ying-Hao Liao (National Yang Ming Chiao Tung University, Taiwan)

November 7, 2023

EX-4-B

- OS12-15 **Development of Conjugate Heat Transfer Immersed Boundary Method based on Low Mach Number Compressible Flow Solver**
9:00-9:20 ChungGang Li (National Cheng Kung University, Taiwan), Rahul Bale, Makoto Tsubokura (Kobe University, Japan)
- OS12-16 **Thermo-Fluid Analysis of Internally Cooled Tools to Improve Cutting Speed for Difficult-to-Cut Materials**
9:20-9:35 Taisei Hasegawa, Kensuke Suzuki, Eiji Shamoto, Takashi Nakamura, Tomoaki Watanabe (Nagoya University, Japan), Koji Nagata (Kyoto University, Japan), Yuki Hatano (NTK CUTTING TOOLS CO., LTD., Japan)
- OS12-17 **A Novel Method in Predicting Heat Transfer Coefficient and Pressure Drop in Pillow-Plate Heat Exchangers**
9:35-9:50 Amirhossein Sabourishirazi, Maryam Ghodrat, Jong-Leng Liow (University of New South Wales, Australia)
- OS12-18 **Simulations of Natural Convection with Heated Moving Sphere by CFD**
9:50-10:05 Meng-Zhe Li, Jomol Lewis, Hua-Ching Chang, Wei-Hsiang Wang (National Chung Hsing University, Taiwan)
- OS12-19 **Study on the Permeability and Wettability of Additively Manufactured Porous Ti6Al4V for Transpiration Cooling**
10:05-10:20 Zun-Kuang Tong, Kuan-Hsueh Lin, Yao-Hsien Liu (National Yang Ming Chiao Tung University, Taiwan)
- OS12-20 **Airfoil Optimization by Adjoint Operator**
10:40-11:00 San-Yih Lin, Jia-Heng Luo, Cheng-Chun Liu, Ming-Yang Lin (National Cheng Kung University, Taiwan)
- OS12-21 **Permeability Field Prediction Using A Machine Learning Algorithm**
11:00-11:15 Anshika Singh, Ching-Yao Chen (National Yang Ming Chiao Tung University, Taiwan)

- OS12-22 **The Analysis of Thermal Flow Field in the Anode Cell**
 11:15-11:30 Chen-Ju Weng, Chia-Chen Ho, Sheng-Yen Hsu (National Sun Yat-sen University, Taiwan), Chien-Hsiung Tsai (National Pingtung University of Science and Technology, Taiwan)
- OS12-23 **Energy Generation and Flow Field of a Finite Length Oscillating Cylinder in a Freestream**
 11:30-11:45 How-Wei Huang, Jun-Rui Lin, Kim-Boom Lua (National Yang Ming Chiao Tung University, Taiwan)
- OS12-24 **The Response of Ion Current in Lifted Non-Premixed Jet Flames under DC Electric Field**
 11:45-12:00 Yu-Ren Chien, Ying-Hao Liao (National Yang Ming Chiao Tung University, Taiwan)
- OS12-25 **Digital Defocusing Micro-Particle Streak Velocimetry for Measuring Three-Dimensional Flow Velocity in Single-Spine Microchannel**
 13:10-13:30 Zi-Ling Lin, Wei-Hsin Tien (National Taiwan University of Science and Technology, Taiwan)
- OS12-26 **Performance Evaluation of Pin Fins with Wings**
 13:30-13:50 Anil Kumar Patil (DIT University, India), Vishwjeet Choudhary (BITS Pilani, India), Manoj Kumar (DIT University, India)
- OS12-27 **The Motion of Ferrofluid Drop Under Three-Dimensional Dynamic Magnetic Field**
 13:50-14:05 Kai-Yu Huang, Yuan-Yu Peng, Ching-Yao Chen (National Yang Ming Chiao Tung University, Taiwan)
- OS12-28 **Influence of Different Magnetic Field Effects on Bubble Rotation on Electrode Surface**
 14:05-14:20 Yen-Ju Chen (National Yang Ming Chiao Tung University, Taiwan), Yan-Hom Li (National Defense University, Taiwan), Ching-Yao Chen (National Yang Ming Chiao Tung University, Taiwan)
- OS12-29 **Two-Phase Flow Separator for High Viscosity Liquid**
 14:20-14:35 Bo-Chuan Hsueh, Yu-Chieh Chen (National Chung Hsing University, Taiwan), Ya-Yu Chiang (National Taiwan University, Taiwan)
- OS12-30 **Scaling Laws and Investigations of the Laser Direct Energy Deposition by CFD model**
 14:50-15:10 Chien-Chou Tseng, Yu-Chi Wang, Ming-Ing Ho (National Cheng Kung University, Taiwan)
- OS12-31 **Development of Raw-Image Ray-Bundling for Focused-Plenoptic 3D-PTV**
 15:10-15:30 Yu-Sheng Chen, Chien-Cheng Chen, Zu Puayen Tan (National Yang Ming Chiao Tung University, Taiwan)
- OS12-32 **Unsteady flow and Heat Transfer Past a Wall-mounted Prism at Low Reynold Number**
 15:30-15:45 Wen-Hao Shih, Chung-Gung Li (National Cheng Kung University, Taiwan)

- OS12-33 **An Experimental Study of Tandem Flapping Wings: Comparative Analysis of Unsteady Aerodynamics in Damselfly and Dragonfly Hovering**
15:45-16:00 Yu-Hsuan Wang, Chien-Hao Chen, Yuan-Hung Wu, Kim Boon Lua (National Yang Ming Chiao Tung University, Taiwan)
- OS12-34 **3-D Acoustic Streaming Flow Patterns Induced by Parallel Longitudinal Spines in Microchannels**
16:30-16:50 Olivia Christy Tarigan, Chen-Chia Li, Wei-Hsin Tien (National Taiwan University of Science and Technology, Taiwan)
- OS12-35 **Enhancing the Performance of Distributed Electric Propulsion**
16:50-17:05 Pin Wei Chiang, Kim Boon Lua (National Yang Ming Chiao Tung University, Taiwan)
- OS12-36 **Flow Fields Of Multiple Finite Length Oscillating Cylinders In Side-By-Side Configuration Normal To The Free Stream**
17:05-17:20 Kai-Xiang Shih, Kim-Boon Lua (National Yang Ming Chiao Tung University, Taiwan)
- OS12-37 **Numerical Simulation of Aerodynamics and Aeroacoustics in True Wireless Stereo Headphone Noise Isolating Designs**
17:20-17:35 Ta-Yuan Cheng, Yu-Chien Chen, Wei-Hsiang Wang (National Chung-Hsing University, Taiwan)
- OS12-38 **Investigating The Application Of Tesla Valve Annular Structure Ethanol Steam Reforming Combined With In Water Gas Shift Reaction**
17:35-17:55 Meng-Hong Zhong, Chung-Gang Li (National Cheng Kung University, Taiwan), Wei-Hsin Chen (National Cheng Kung University / Tunghai University / National Chin-Yi University of Technology, Taiwan)