

GS1: General Session

November 6, 2023

CON-2

- GS1-1 **Investigation of Thermal Performance of a Double Pipe Heat Exchanger with Wavy Inner Pipe**
14:10-14:30 Huan-Sen Peng (Industrial Technology Research Institute, Taiwan), Peng-Jen Chen (National Chin-Yi University of Technology, Taiwan)
- GS1-2 **Preliminary Research in Fiber Optic Laser Therapy for Treatment of Breast, Head and Neck Tumors**
14:30-14:50 Akiyoshi Obonai (Tohoku University, Japan), Takuma Kogawa (National Institute of Technology, Hachinohe College, Japan), Yuki Kanda, Tetsuya Kodama, Atsuki Komiya (Tohoku University, Japan)
- GS1-3 **Performance Investigation of Spectral Beam Splitting Photovoltaic Thermal System**
14:50-15:10 Abid Ustaoglu, Suheyl Bilal Sungur, Hakan Buyukpatpat (Bartın University, Turkey), Junnosuke Okajima (Tohoku University, Japan)
- GS1-4 **Heat Transfer Control for Uniform Cooling of Elongated Device**
15:10-15:30 Mamoru Yamamoto, Yoshikatsu Nakano (Tohoku University, Japan), Koji Komata, Yuji Oda, Koichi Matsuo (Iwasaki Electric Co., Ltd., Japan), Atsuki Komiya (Tohoku University, Japan)
- GS1-5 **Analysis of Emission Control Technology in Varied Temperatures for Automotive Applications**
15:50-16:10 Aliza M. Willsey, Thomas S. Welles, Jeongmin Ahn (Syracuse University, USA)
- GS1-6 **Modeling and Analysis of the Flue Gas Recirculation System for Iron Ore Sintering Process**
16:10-16:30 Hui-Xuan Chen, Sheng-Yen Hsu (National Sun Yat-sen University, Taiwan), Yi-Sung Huang (China Steel Corporation, Taiwan)
- GS1-7 **Performance Investigation of Encapsulated PCM Battery Thermal Management System**
16:30-16:50 Bilal Kursuncu, Abid Ustaoglu (Bartın University, Turkey), Junnosuke Okajima (Tohoku University, Japan), Emre Demirkol (Bartın University, Turkey)
- GS1-8 **The Effect of Tap Locations on the Temperature Distribution of Lithium-Ion Battery Cell during Discharging**
16:50-17:10 Yu-Lin Zheng, Sheng-Yen Hsu (National Sun Yat-sen University, Taiwan), Nan-Hung Yeh (E-One Moli Energy Corp., Taiwan)

November 7, 2023

CON-2

- GS1-9 **Experimental Observation of Erosion Structure from the Incubation Stage to the Accumulation Stage in Liquid Impingement Erosion**
9:00-9:20 Kei Fujisawa (Nagaoka University of Technology, Japan)
- GS1-10 **Analysis of the Wind Flow and Fuel Heat Release Rate on Dynamics of Wildfire**
9:20-9:40 Maryam Ghodrat, Ali Edalati-Nejad (University of New South Wales, Australia)
- GS1-11 **Cancelled**
- GS1-12 **Numerical Investigation of Droplet Collision Using the Lattice-Boltzmann Model**
9:40-10:00 Juan Restrepo-Cano, Francisco E. Hernández-Pérez, Hong G. Im (King Abdullah University of Science and Technology (KAUST), Saudi Arabia)
- GS1-13 **Analysis of Exploding Bridge Foil and Flyer Launch in Slapper Detonator**
16:30-16:50 Kyoungjin Kim (Kumoh National Institute of Technology, Korea)
- GS1-14 **Two-dimensional Particle-in-cell Simulation of Plasma Flow in Diverging Magnetic Nozzle**
16:50-17:10 Jihong Lee, Masayuki Takahashi (Tohoku University, Japan)
- GS1-15 **Effect of DC Magnetic Field Strength on Volumetric Entropy Generation in Sudden Expansion Tube with Dimpled Fin**
17:10-17:30 Emrehan Gürsoy (Karabük University, Turkey), Hayati Kadir Pazarlıoğlu (Karabük University / Aselsan Inc., Turkey), Mehmet Gürdal (Karabük University / Kastamonu University, Turkey), Engin Gedik, Kamil Arslan (Karabük University, Turkey)
- GS1-16 **Evaluating the Effect of Hot Electrons on the Plasma Dynamics in a Magnetic Nozzle using a Multifluid-FDTD Model**
17:30-17:50 Shlok Shrivastava, Naofumi Ohnishi, Masayuki Takahashi (Tohoku University, Japan)

November 8, 2023

CON-2

- GSS1-17 **Particle-in-cell Simulation of the Cross-field Transport in a Plasma Thruster employing a Time-varying Magnetic Field**
9:00-9:20 Hiroyuki Suzuki, Masayuki Takahashi (Tohoku University, Japan)
- GS1-18 **Fundamental Design of Directional Radiation Metamaterials for Asteroid Probe Radiator**
9:20-9:40 Azusa Sudo (Niigata University, Japan), Ryunosuke Moriya (Tokyo University of Science, Japan), Sumitaka Tachikawa (Japan Aerospace Exploration Agency, Japan), Atsushi Sakurai (Niigata University, Japan)

- GS1-19 **Compressibility Effects around Propeller on Propeller-Wing Aerodynamic Interaction for Mars Airplane**
9:40-10:00 Yoshikatsu Furusawa, Keiichi Kitamura (Yokohama National University, Japan), Tsubasa Ikami, Masaki Okawa, Hiroki Nagai (Tohoku University, Japan)
- GS1-20 **Pulsed Jet Impingement On Regolith Simulants Under Lunar Conditions Using PIV**
10:00-10:20 Senthilkumar Subramanian, Andrew Wilson, Craig White, Konstantinos Kontis (University of Glasgow, UK), David Evans (Fluid Gravity Engineering Ltd., UK), Jeroen Van den Eynde (ESA-ESTEC, Netherlands)
- GS1-21 **Numerical Simulation on Thermal Decomposition of a Hydrocarbon Fuel under Supercritical State using CFD with Reaction Model**
10:40-11:00 Tatsushi Isono (Japan Aerospace Exploration Agency, Japan), Takuto Miyaura (Tohoku University, Japan), Yu Daimon, Takuo Onodera (Japan Aerospace Exploration Agency, Japan), Sadatake Tomioka (Japan Aerospace Exploration Agency / Tohoku University, Japan)
- GS1-22 **Evaluation of Flight Performance of a Laser-blast Rider Driven by Repetitive Pulses**
11:00-11:20 Yamato Muto, Masayuki Takahashi (Tohoku University, Japan)
- GS1-23 **Design and Numerical Study of an Intake for Electrostatic Ramjet Engine**
11:20-11:40 Koki Ito, Masayuki Takahashi (Tohoku University, Japan)
- GS1-24 **Visualization Study on the Ultrasonic-Driven Rectangular Synthetic Jet**
11:40-12:00 Hikari Furukawa, Kiiro Adachi, Katsushi Furutani, Taro Handa (Toyota Technological Institute, Japan)
- GS1-25 **Research on Improving the Performance of the Vertical Axis Wind Turbine using J-type Airfoil**
13:10-13:30 Rodrigo Pena Valdes, Genki Ohmori (Nagaoka University of Technology, Japan), Shinya Imai (National Institute of Technology, Gifu College, Japan), Wataru Yamazaki (Nagaoka University of Technology, Japan)
- GS1-26 **Research and Development of Automatic Flight of Small Bird-Like Innovative Air Vehicle**
13:30-13:50 Utaka Kagawa, Masaki Hirano, Hajime Izumi, Tadateru Ishide (National Institute of Technology, Kisarazu College, Japan), Shigeru Obayashi (Tohoku University, Japan)
- GS1-27 **Design of UAV Propeller and Performing CFD Analysis**
13:50-14:10 Hicabi Mustafa Canbaz, Yilmaz Kaan Karaçomak, Veli Çelik, Kamil Arslan (Ankara Yıldırım Beyazıt University, Turkey)
- GS1-28 **Effect of Pitching Airfoil Aspect Ratio and Pitch Amplitude on Lift and Drag Forces in a Periodic Flow**
14:10-14:30 Hiroki Tanaka, Yohsuke Tanaka, Yoshitaka Isoda (Kyoto Institute of Technology, Japan)

- GS1-29 **Applying the Finite Element Method to Solve the Two-Dimensional Flow Passing Through an Obstacle**
14:50-15:10 Ching-Huang Yang, Tzi-Li Li (National Cheng Kung University, Taiwan), Dean Chou (National Cheng Kung University / National Center for High-performance Computing, Taiwan)
- GS1-30 **Numerical Investigation of Effects of Ring Curvature on Starting Characteristics of Supersonic Ring Intakes**
15:10-15:30 Aoi Shibakita, Masanobu Matsunaga, Hideaki Ogawa (Kyushu University, Japan), Rabi Tahir (McGill University, Canada), Justin Kin Jun Hew, Roderick W. Boswell (Australian National University, Australia)
- GS1-31 **Analytical and Numerical Studies of Shock Wave Reflection in Axisymmetric Internal Flows**
15:30-15:50 Justin Kin Jun Hew (Australian National University, Australia), Masanobu Matsunaga, Hideaki Ogawa (Kyushu University, Japan), Rod W. Boswell (Australian National University, Australia), Sannu Mölder (Ryerson University, Canada)
- GS1-32 **Experiments on Aerodynamic Sound Radiated from a Row of Protuberance in Boundary Layers**
15:50-16:10 Mikio Sakai, Ayumu Inasawa (Tokyo Metropolitan University, Japan)