

GS1: General Session

November 10, 2025

EX3-B

- GS1-1 **Coupled Thermal-Solute Tracer Analysis for Subsurface Fracture Structure Characterization**
13:30-13:48 Mufan Qiao, Anna Suzuki (Tohoku University, Japan)
- GS1-2 **Mapping Heat Flow Paths in Fractured Rocks via Topological Data Analysis**
13:48-14:06 Togo Hasumi (Tohoku University, Japan), Yusuke Imoto (Kyoto University, Japan), Tomoki Uda (University of Toyama, Japan), Anna Suzuki (Tohoku University, Japan)
- GS1-3 **A Simulation Framework for Predicting Co-creation Dynamics Using the Free Energy Principle**
14:06-14:24 Ryo Chiba, Kento Katsuragawa, Atsushi Miura, Anna Suzuki (Tohoku University, Japan)
- GS1-4 **Exploration of Co-Creation Dynamics through Visualizing Value Plurality**
14:24-14:42 Atsushi Miura, Kento Katsuragawa, Ryo Chiba, Naoki Okada, Togo Hasumi, Ryo Saito, Hiromi Kubota, Anna Suzuki (Tohoku University, Japan)
- GS1-5 **Geothermal Energy and Subjective Well-Being: Cross-Cultural Perspectives on Social Impacts**
14:42-15:00 Kento Katsuragawa, Anna Suzuki, Ryo Chiba, Atsushi Miura (Tohoku University, Japan)

November 11, 2025

EX4-B

- GS1-6 **CFD Simulation of Methane-Hydrogen Combustion and NO Emissions**
15:15-15:33 Kuan-Lin Li, Chien-Chou Tseng, Ying-Zhi Chen, Ming-Hsun Wu (National Cheng Kung University, Taiwan), Cheng-Jui Li, Wei-Dong Hsieh (China Steel Corporation, Taiwan)
- GS1-7 **Kinetic Simulation of Plasma Dynamics for the Development of an Air-Breathing Electric Propulsion System**
15:33-15:51 Ken Sakamoto, Masayuki Takahashi, Koki Ito (Tohoku University, Japan)
- GS1-8 **Particle Simulation on Energy Transport and Thrust Generation for Laser-plasma-driven Explorer for UNtouched low Altitude (LUNA) in a Rarefied Environment**
15:51-16:09 Sakira Uno, Masayuki Takahashi (Tohoku University, Japan)
- GS1-9 **Experimental Study on Particle and Gas Dynamics in a Simulated Volcanic Eruption using Schlieren Image Velocimetry**
16:09-16:27 Akuto Kaneko, Kazuya Seo (Kogakuin University, Japan), Kiyonobu Ohtani (Tohoku University, Japan), Kae Tsunematsu, Nils Steinau, Takato Tomizawa (Yamagata University, Japan)

- GS1-10
16:27-16:45 **Influence of Separation Distance on Temperature Distribution and Velocity Field Dynamics in Multiple Fire Source Arrays**
Osman Eissa (University of New South Wales, Australia), Masud Behnia (University of Rome, Italy), Maryam Ghodrat (University of New South Wales, Australia)
- 16:45-17:00 BREAK
- GS1-11
17:00-17:18 **Blades Optimization and Manufacturing for a Semicircular Savonius Wind Turbine**
Omid Ali Zargar, Jui-Ching Hsieh, Yu-Siang Lin (National Chin-Yi University of Technology, Taiwan)
- GS1-12
17:18-17:36 **Design Considerations for Landing Pads with Airflow Holes for Small Rotorcraft**
Taisei Hara, Hikaru Otsuka, Hiroshi Tokutake (Kanazawa University, Japan), Hiroki Nagai (Tohoku University, Japan)
- GS1-13
17:36-17:54 **Numerical Study on Aerodynamic Behavior of Base Shape for Vertical Landing Rocket in Martian Atmosphere**
Keigo Tachibana, Nobuyoshi Fujimatsu (Toyo University, Japan)
- GS1-14
17:54-18:12 **Vibro-Acoustic Modelisation of Periodic Woven Structures Dedicated to Multi-Objective Shape Optimization**
Thanasak Wanglomklang, Sébastien Besset, Frédéric Gillot (Ecole Centrale de Lyon, France), Sonia Mahmoudi (WPI-AIMR Tohoku University, RIKEN ITHEMS, WPI-SKCM Hiroshima University, Japan)
- GS1-15
18:12-18:30 **Experiments on Sound Radiation from Protuberance in Boundary Layers : Correlation Coefficient with Wall-Velocity Fluctuations**
Takatoshi Kasa, Ayumu Inasawa (Tokyo Metropolitan University, Japan)

November 12, 2025
EX-4B

- GS1-16
9:00-9:18 **Momentum Transport in Sheared Liquids: Insights from Molecular Dynamics Simulations**
Masaharu Yoshida, Donatas Surblys, Taku Ohara (Tohoku University, Japan)
- GS1-17
9:18-9:36 **Experimental Study on Nondestructive Evaluation of Mechanical Properties of Fatigue Damaged 304 Stainless Steel with Eddy Current Testing Signals**
Yinqiang Qu, Ke Deng, Hong-En Chen, Shejuan Xie, Zhenmao Chen (Xi'an Jiaotong University, China), Tetsuya Uchimoto (Tohoku University, Japan)
- GS1-18
9:36-9:54 **Nondestructive Evaluation of Mechanical Property of SS400 Steel with Fatigue Damage Based on Magnetic Adaptive Testing Signals**
Ke Deng, Zhijun Wang, Yinqiang Qu, Hong-En Chen, Shejuan Xie, Zhenmao Chen (Xi'an Jiaotong University, China), Tetsuya Uchimoto (Tohoku University, Japan)