

## GS1 : General Session

### EX-4

November 7, 2018

14:00-14:20 GS1-1

Tsunami Suppression by Floating Breakwater

R. Durand, K. Fukudome, H. Mamori, M. Yamamoto

14:20-14:40 GS1-2

Development of Direct Forcing Immersed Boundary Flow Solver with Improved Divergence-Free Compensated Framework

P.-H. Chiu, H.J. Poh

14:40-15:00 GS1-3

Simulation of Unsteady Flows through Multi-stage Stator-rotor Full-annulus Blade Rows in LP Steam Turbine

H. Miyazawa, T. Furusawa, S. Yamamoto

15:00-15:20 GS1-4

Data Compression for High-Performance Flow Simulations

D. Kolomenskiy, R. Onishi, H. Uehara

15:40-16:00 GS1-5

Study of a Collision Model for IBM—FEM Coupling Simulation of Shot Peening Process

T. Kubota, Y. Mizuno, S. Takahashi, K. Fukuda

16:00-16:20 GS1-6

Prediction of Rubber Friction on Wet and Dry Rough Surfaces Using Flow Structure Coupling Simulation

T. Kubota, Y. Mizuno, S. Takahashi

16:20-16:40 GS1-7

P-CG (Particle-Cartesian Grid, Disaggregate-Aggregate) Model for Attraction/Repulsion

J. Imamura

16:40-17:00 GS1-8

DNS of A Turbulent Pipe Flow by MPI+OpenMP for Multithread Computing

J. Uchiyama, T. Kunugi, S. Satake

17:20-17:40 GS1-9

Fluid Dynamical Consideration on Signal Propagation in Creature Crowd with Molecular Kinetic Model

S. Sultana, M. Hasan, D. Kang, H. Hirahara

17:40-18:00 GS1-10

Investigation of The Effect of Vegetable Oils in MQL System On the Milling of Hard Materials

B. Kursuncu, Y.E. Biyik, H. Camci

18:00-18:20 GS1-11

Temporal Instability of Charged Conical Liquid Sheet under an Axial Electric Field  
*H. Li, L. Qin, L. Yang*

**EX-4**

November 8, 2018

9:00-9:20 GS1-12

Composite Gel-Polymer Electrolytes for Rechargeable Li-ion Batteries  
*V. DeBiase, J. Ahn*

9:20-9:40 GS1-13

Dissolution Of Pb And Zn From Zinc Extraction Residual Using Chloride Salts  
*A. Yaras, H. Arslanoglu*

9:40-10:00 GS1-14

Cr (VI) Removal from Aqueous Solution by Iron (III) Hydroxide-Loaded Paper Mill Sludge  
*A. Yaras, H. Arslanoglu*

10:00-10:20 GS1-15

Low Temperature Magnetocaloric Materials for Cryogenic Gas Liquefaction by Magnetic Cooling Technique  
*S. Taskaev, K. Skokov, V. Khovaylo, M. Ulyanov, D. Bataev, A. Dyakonov, D. Zherebtsov*

10:40-11:00 GS1-16

Assessment of Temperature Effect on Performance of PV-V-Trough and CPC Systems  
*A. Ustaoglu, U. Ozbey*

11:00-11:20 GS1-17

An Experimental Evaluation of Temperature Effect on Performance of PV-CPC Systems  
*A. Ustaoglu, U. Ozbey, C. Kandilli*

11:20-11:40 GS1-18

Full-Spectrum Light Capture by Compound Nanostructures for Solar Energy  
*L. Yang, C. Li*

11:40-12:00 GS1-19

Performance Evaluation of a Cooling System for Lithium-Ion Battery Utilizing Phase Change Material with Enhanced Thermal Conductivity  
*H. Hata, T. Kouno, T. Yamada, N. Ono*

14:50-15:10 GS1-20

Characteristics of Liquid Film Formed with Liquid Column Oscillation in Pulsating Heat Pipe (Observation by Using Forced Oscillation System)  
*M. Miura, H. Arai, T. Ogura, H. Ito*

15:10-15:30 GS1-21

Molecular Dynamics Simulation of the Bubble Growth Under Various Wall Conditions  
*S. Kakamu, T. Tsuneyoshi, T. Ito, Y. Tsuji*

15:30-15:50 GS1-22

Parametric Study with Theoretical Models on a Drying Process of Liquid Thin Film by Airflow  
*C.T. Gueye, D. Suzuki, H. Watanabe, N. Ono*

15:50-16:10 GS1-23

Gravity-driven Flow of a Weakly Viscoelastic Film down a Heated Inclined Plane  
*T. Hu, Q.-F. Fu, L.-J. Yang*

16:30-16:50 GS1-24

Study on Structure of Supersonic Microjets (Measurements by Twyman-Green Interferometers)  
*S. Sugawara, S. Nakao, Y. Miyazato, Y. Ishino*

16:50-17:10 GS1-25

Effects of Unrelaxed Tension on the Spatial Linear Instability of Viscoelastic Jets  
*L. Xie, L.-J. Yang, Q.-F. Fu*

17:10-17:30 GS1-26

Instability of an Elliptic Liquid Jet  
*X. Cui, L.-J. Yang, Q.-F. Fu*

#### **EX-4**

**November 9, 2018**

9:00-9:20 GS1-27

CFD Analysis of Swirling Induction Type Displacement HVAC System in a Large Factory Space  
*K. Hirose, W. Yamazaki, N.D.B. Thanh, H. Koga, Y. Toda*

9:20-9:40 GS1-28

Coupling Effect Analysis of Transmembrane Heat and Moisture Transfer  
*J. Duan, Z. Shen, J. Min*

9:40-10:00 GS1-29

Pressure Loss Prediction of Heat Exchanger under Frosting Condition  
*S. Takachi, K. Fukiba, S. Han*

#### **CON-1**

**November 9, 2018**

9:00-9:20 GS1-30

Numerical Study on Aerodynamic Characteristics of Reusable Vehicle-eXperiment Rocket with Body-flap during Gliding  
*Y. Nishikawa, N. Tuboi, T. Ito, S. Nonaka*

9:20-9:40 GS1-31

Simulation and Control of Flexible Aero-Structures using Nonlinear Reduced-Order Models  
*Y. Wang, K. Otsuka, K. Fujita, H. Nagai, K. Makihara*

9:40-10:00 GS1-32

Investigation on Pseudo Enthalpy Generation in Airplane CFD

*K. Matsushima, R. Shimizu, K. Goshima*

10:00-10:20 GS1-33

Automatic Optimization of Aerodynamic Noise of a Vehicle Based on Multi-parameters

*L. Qin, B. Lv, C. Lai, Z. Fu, Y. Zhou*

#### **EX-4**

**November 9, 2018**

10:40-11:00 GS1-34

Coupled Radiation, Conduction and Convection Analysis for Low Density Heat Shield Material in High Temperature Environments

*B. Owiti, T. Sakai, H. Kawabata, Y. Ishida*

11:00-11:20 GS1-35

Thermal Simulation and Experimental Verification of Permanent Magnet Synchronous Motor Based on Fluid-Solid Coupling Method

*B. Lyu, L. Qin, C. Lai, Y. Zhou*

11:20-11:40 GS1-36

Flow and Heat Transfer over a Stretching or Shrinking Cylinder

*I. S. Awaludin, R. Ahmad, A. Ishak*

11:40-12:00 GS1-37

The effect of heat and mass transfer on the instability of confined liquid jets in the presence of acoustic oscillations

*B.-Q. Jia, L.-J. Yang, Q.-F. Fu, L. Xie*

#### **CON-1**

**November 9, 2018**

10:40-11:00 GS1-38

Comparison of Flow Characteristics for 5-Hole Pitot Tube with Different Diameters Towards the Flight Control for UAV

*K. Furuta, N. Fujimatsu*

11:00-11:20 GS1-39

Flow Characteristics in Sub-/Super-sonic Plane Mixing Layer

*J. Wei, X. He, Y. Huang, Y. Zhou, G. Gong*

11:20-11:40 GS1-40

Wind Tunnel Test for Videogrammetric Deformation Measurement of UAV for Mars Airplane Balloon Experiment-1 (MABE-1)

*K. Fujita, A. Oyama, D. Kubo, M. Kanazaki, H. Nagai*

#### **EX-4**

November 9, 2018

13:10-13:30 GS1-41

Numerical Investigation of Real Gas Effect in High Pressure Flows with Nonequilibrium Condensation

*T. Furusawa, H. Miyazawa, S. Moriguchi, S. Yamamoto*

13:30-13:50 GS1-42

Study on Structure of Supersonic Microjets (RANS Simulation with SST  $k-\omega$  )

*S. Sugawara, S. Nakao, Y. Miyazato, Y. Ishino*

13:50-14:10 GS1-43

Experimental Investigations on Spray Characteristics of a Novel Plain-Jet Airblast Atomizer

*J. Yi, Y. Kanghong, Z. Kai, W. Yunbiao, J. Tian, H. Xiaomin*

14:10-14:30 GS1-44

Numerical Study of Plasma Acceleration in an  $m = 0$  Coil Thruster

*Y. Yamakawa, M. Takahashi, N. Ohnishi*

#### **CON-1**

November 9, 2018

13:10-13:30 GS1-45

Three-dimensional Flow Simulation around Two S-shaped Turbines Rotating Independently

*M. Araki, T. Kawamura*

13:30-13:50 GS1-46

Viscous Flows Induced by Two Plates of Finite Width Moving in Opposite Directions

*C.-M. Liu*

13:50-14:10 GS1-47

Analysis of Lubrication in a Reciprocating Slider

*Y. Higashitani, S. Kawabata, N. Inayoshi, Y. Oki, H. Kato, K. Murai, F. Itoigawa, T. Nakamura*

14:10-14:30 GS1-48

Study on Multi-model Fluid-structure Coupling Method of Wind Turbine under Complex Inflow

*L. Wang, J. Cao, T. Wang, R. Han*

#### **EX-4**

November 9, 2018

14:50-15:10 GS1-49

Experimental Study of the Effect of Number of Discharge Times on Motion of Thin Resin Plate Attached Microbubbles Induced by Underwater Pulse Discharge

*T. Koita, Y. Seki*

15:10-15:30 GS1-50

Study on Structure of Shock Trains by Mach-Zehnder Interferometers

T. Takeshita, S. Nakao, Y. Miyazato

15:30-15:50 GS1-51

Study on Structure of Shock Trains by RANS Simulations

T. Takeshita, S. Nakao, Y. Miyazato

15:50-16:10 GS1-52

An Examination of Hydrogen or Ethylene Combustion with Precombustion Shock Train in Dual-mode Combustor

T. Arakawa, K. Nojima, K. Kobayashi, S. Tomioka

16:30-16:50 GS1-53

Effect of Inlet Wetness on Performance of Transonic Compressor Rotor

S. Moriguchi, H. Miyazawa, T. Furusawa, S. Yamamoto

16:50-17:10 GS1-54

Turbulent Pipe Flow Of Particles In A Drag Reducing Fluid

S. Zade, F. Lundell, L. Brandt

17:10-17:30 GS1-55

Change in Fragility of Red Blood Cell Caused by Atmospheric Plasma Irradiation

T. Yano, C. Ogasawara, R. Yaotani