

Program

Please refer to the online program for the chairpersons of each session.

Oct 27 (Tue)

Room A (Conference Hall)

09:00 - 09:10 **Opening Ceremony**

09:10 - 10:00 **Invited Lecture**

10:20 - 12:00 **Aerodynamics and Design: Computational Fluid Dynamics (1)**

Chair: Yoh Murakami (Shinshu University)

1A01	Experimental Evaluation of Burst-Mode Leading-Edge DBD Plasma Actuation for Post-Stall Aerodynamic Improvement of a NACA 0012 Airfoil ○Takafumi Yamada ¹ , Hayate Norimoto ² (¹ Teikyo University , ² National Institute of Technology, Tsuyama College)
1A02	Numerical Analysis of Two-Phase Transpiration Cooling with Functionally Graded Porosity under Non-uniform Heat Flux ○Jinung Lee ¹ , Jaeseung Heo ¹ , Reynolds Addo-Akoto ¹ , Jaehan Cho ^{1,2} , Jae-Hung Han ¹ (¹ Korea Advanced Institute of Science and Technology (KAIST) , ² Agency for Defense Development (ADD))
1A03	Linear Stability Analysis Framework for Crossflow Instability of Three-Dimensional Boundary-Layer Using CFD Data ○Hyeonwoo Hwang ¹ , Donghun Park ¹ (¹ Pusan National University)
1A04	Memory-Efficient Graph Neural Networks for Predicting Missile Aerodynamic Performance ○Kang Kuk You ³ , Sang A Lee ¹ , Kyu Hong Kim ³ , Shin Kyu Jeong ² (¹ Korea Institute of Industrial Technology , ² Kyung Hee University , ³ Seoul National University)
1A05	Comparative Assessment of Transition Models for RANS Simulation of Hypersonic Flows Using SU2 ○Wooseung Lee ¹ , Hyeonwoo Hwang ¹ , Donghun Park ¹ (¹ Pusan National University)

13:00 - 14:20 **Aerodynamics and Design: Computational Fluid Dynamics (2)**

1A06	Shape Optimization of Axisymmetric Bodies for Focused Sonic Boom Reduction ○Tomoharu Kikuchi ¹ , Taro Imamura ¹ , Rei Yamashita ¹ (¹ The University of Tokyo)
1A07	Globally and Locally Conservative Meshless Method with a Compact Discretization Stencil for 3D Computational Structural Dynamics ○Sangwoo Lee ¹ , Seo Jiwan ¹ , Kim Kyu Hong ¹ (¹ Seoul National University)
1A08	Numerical Investigation of Ground and Wall Effects on the Aerodynamic Characteristics of a Cyclorotor ○Ryoma Eguchi ¹ , Taro Imamura ¹ , Rei Yamashita ¹ (¹ The University of Tokyo)
1A09	Stability analysis and direct numerical simulations for predicting turbulence transition induced by freestream-turbulence-driven traveling waves ○Naomasa IKEGAMI ¹ , Takahiro ISHIDA ² , Keisuke OHIRA ³ , Takahiro TSUKAHARA ¹ , Naoko TOKUGAWA ² (¹ Tokyo University of Science , ² Japan Aerospace Exploration Agency , ³ Ryoyu Systems Co. Ltd.)

14:30 - 16:10 **Aerodynamics and Design: Computational Fluid Dynamics (3)**

1A10	Urban Micro-meteorological Simulations Validated by Lidar and Drone Observations Keigo HIRASAWA ³ , ORyo ONISHI ³ , Pranith AYAPILLA ³ , Yuki YASUDA ¹ , Daisuke KUBO ² (¹ Japan Agency for Marine-Earth Science and Technology , ² Japan Aerospace Exploration Agency , ³ Institute of Science Tokyo)
1A11	Effects of freestream turbulence with multiple wavelength peaks on transition processes in a swept flat plate boundary layer ○Erika SHIMAMURA ¹ , Kosuke NAKAGAWA ² , Takahiro ISHIDA ³ , Takahiro TSUKAHARA ¹ , Naoko TOKUGAWA ³ (¹ Tokyo University of Science , ² Tohoku University , ³ Japan Aerospace Exploration Agency)
1A12	Development of a Porous-Material Response Solver for Ablative Thermal Protection System Analysis ○Seonghwan Kim ² , Hojun You ¹ , Yosheph Yang ³ , Kyu Hong Kim ² , Jae Gang Kim ¹ (¹ Sejong University , ² Seoul National University , ³ Kangwon National University)
1A13	Aerodynamic Optimization of Deployable Krueger Flap Configurations Considering Kinematic Constraints ○Kazuhiro TAKEOKA ¹ , Masahiro KANAZAKI ¹ (¹ Tokyo Metropolitan University)
1A14	Investigation of Real Gas Effects on Aerodynamic Heating Analysis for Leading Edge with Composite Insulation Structure in Hypersonic Flows ○Minjae Yun ¹ , Hyeonjin Lee ¹ , Sungha Kwon ² , Donghun Park ¹ (¹ Pusan National University , ² Hanwha Aerospace)

Room B (Main Hall)

10:20 - 12:00 **Aerodynamics and Design: Aircraft, Helicopter, AAM and UAV Design (1)**

1B01	A Projector-Based Partitioned Method for Three-dimensional Flexible Multi-body Dynamics Analysis ○Minho Hwang ¹ , Seung-Hoon Kang ² , SangJoon Shin ¹ , Kwang-Chun Park ³ (¹ Seoul National University , ² Sejong University , ³ University of Colorado Boulder)
1B02	A Study on the design method of centrifugal deformation compensation for a rotating seal test rig ○Kim Wooyoung ² , Ryu Seungjun ² , Kim Yongha ² , Kim Young Cheol ¹ (¹ Korea Institute of Machinery & Materials , ² School of Mechanical Engineering, Chungnam National University)
1B03	Generalization of Induced Velocity Correction in Actuator Surface Method for Arbitrary Rotor Blade Geometries ○Dahye Kim ¹ , Donghun Park ¹ (¹ Pusan National University)
1B04	Effects of Rotor-Wing Distance and Wing Size on Hovering Performance of Winged Helicopters ○Kenji Furuki ¹ , Shunsaku Arita ¹ , Noriaki Itoga ¹ (¹ National Defense Academy)

1B05	Aero-Propulsive Coupling Collaborative Optimization of Distributed Leading-Edge Embedded Ducted Wings ○Zhenwei Cai ^{1,2} , Yiyuan Ma ^{1,2} , Zhonghua Han ^{1,2} (¹ School of Aeronautics, Northwestern Polytechnical University , ² National Key Laboratory of Aircraft Configuration Design)
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13:00 - 14:20 Aerodynamics and Design: Aircraft,Helicopter,AAM and UAV Design (2)

1B06	A Study on Bayesian Optimization Framework for Aerodynamic Design of Airfoil and Wing Geometry in Long Endurance UAV Applications ○SUKYUNG YOON ¹ , DONGHUN PARK ¹ (¹ Pusan National University)
1B07	High-Fidelity Aerodynamic-Motion Coupled Virtual Flight Simulation for Helicopter Near-Ground Operations ○Yang Liu ¹ , Yongjie Shi ¹ , Yonghua Liu ¹ , Guohua Xu ¹ (¹ Nanjing University of Aeronautics and Astronautics)
1B08	A Bio-inspired Flapping Mechanism Based on a Degree-4 Vertex Origami Pattern ○Hiroya Kobayashi ¹ , Chisaki Kitajima ² , Tomohiro Tachi ³ , Kazuya Saito ² (¹ Graduate School of Design, Kyushu University , ² Faculty of Design, Kyushu University , ³ Graduate School of Arts and Sciences, The University of Tokyo)
1B09	Flexible Aircraft Design Using an AI-Assisted MDAO Framework ○Kim Jeonghwan ¹ , Yee Kwanjung ¹ (¹ Seoul National University)

14:30 - 15:50 Aerodynamics and Design: Aircraft,Helicopter,AAM and UAV Design (3)
Chair: Yongha Kim (Chungnam National University)

1B10	Numerical and Experimental Validation of a New Procedure of Propeller Design for Multicopters under Hovering Conditions ○Gaku Hasegawa ¹ , Yoh Murakami ¹ , Satoru Shinoda ¹ (¹ Shinshu University)
1B11	Mission-Profile-Based Multidisciplinary Design Optimization for Long-Endurance UAVs ○Haojie REN ^{1,2} , Yiyuan MA ^{1,2} , Zhonghua HAN ^{1,2} (¹ School of Aeronautics, Northwestern Polytechnical University , ² National Key Laboratory of Aircraft Configuration Design)
1B12	Toward CFD-Based Aerodynamic Evaluation of Blended-Wing-Body Aircraft Using Conceptual-Design-Reconstructed Airplane Configurations ○Kota NAKAMURA ¹ , Yoshiharu TAMAKI ¹ , Taro IMAMURA ¹ (¹ University of Tokyo)
1B13	Multi-Objective Design Optimization of a Single-Rotor Tail-Sitter UAV with Passive Aerodynamic Anti-Torque Generation ○Takaharu Yoshida ¹ , Masashi Kawashima ^{1,2} , Ryohei Yoshimura ³ , Akinori Harada ¹ , Shin-Ichiro Higashino ¹ (¹ Department of Aeronautics and Astronautics, Kyushu University , ² Aerospace System Company, Kawasaki Heavy Industries Ltd. , ³ Disaster Prevention Research Institute, Kyoto University)

16:00 - 17:20 Aerodynamics and Design: Aircraft,Helicopter,AAM and UAV Design (4)
Chair: Taro Imamura (The University of Tokyo)

1B14	Conceptual Design of the Nine-seater Turbo-generator Hybrid eVTOL ○Choi Seongwook ¹ (¹ Korea Aerospace Research Institute)
1B15	Generative-Learning-Based Geometric Modeling Framework for Winged and Lifting-Body Aircraft ○Jiehua Tian ¹ , Feng Qu ¹ (¹ Northwestern Polytechnical University)
1B16	Mission-Weighted Infill Sampling and Dynamic Fidelity Indicator for Efficient Aerodynamic Surrogates ○Yoo KyeongTae ¹ , Jo Yeongmin ¹ (¹ Hanseo University)
1B17	Suppression of Icing by a Low-Humidity, Moist Air Film ○Sho Kishiyama ¹ , Katsuyoshi Fukiba ¹ (¹ Shizuoka University)

Room C (Main Hall)

10:20 - 12:00 Aerodynamics and Design: Unsteady Aerodynamics(1)
Chair: Masahiro Kanazaki (Tokyo Metropolitan University)

1C01	Effect of High-Frequency Flapping Jet on Subsonic Compressible Corner Flow ○Ryo Onishi ¹ , Soki Matsuura ¹ , Kazuma Ikeuchi ¹ , Akira Urita ¹ , Taro Handa ¹ (¹ Toyota Technological Institute)
1C02	Experimental Study on Suppression of Normal Shock-Wave Oscillation Using High-Frequency Flapping Jets ○Soki Matsuura ¹ , Ryo Onishi ¹ , Kazuma Ikeuchi ¹ , Akira Urita ¹ , Taro Handa ¹ (¹ Toyota Technological Institute)
1C03	Time-Dependent Linear Operator Analysis of Vortex-Gust Interaction in Cylinder Wake ○Yuto Nakamura ² , Shintaro Sato ¹ , Naofumi Ohnishi ¹ (¹ Tohoku University , ² Nagoya University)
1C04	Investigation of Atmospheric Turbulence Effects on Blade-Vortex Interaction Characteristics Using Vortex Method ○Da-bin Jung ¹ , Sang Min Son ¹ , Chan-Ho Song ¹ , Rho Shin Myong ^{1,2} , Hakjin Lee ^{1,2} (¹ Gyeongsang National University , ² Global Research Center for Aircraft Core Technology)
1C05	Experimental Study on Rotor-Rotor Interference of Coaxial Rotors in Forward Flight ○Ryota Moriwaki ¹ , Tsubasa Ikami ¹ , Hiroki Nagai ¹ (¹ Tohoku University)

13:00 - 14:20 Aerodynamics and Design: Unsteady Aerodynamics(2)
Chair: Takafumi Yamada (Teikyo University)

1C06	Experimental Investigation on Incident Shock Wave-Compression Waves/Boundary Layer Interactions ○Mingchi Pang ¹ , Yue Zhang ¹ , Huijun Tan ¹ (¹ Nanjing University of Aeronautics and Astronautics)
1C07	Low-Frequency Unsteadiness of Dual-Cowl Shock-Wave/Boundary-Layer Interaction Under a Central Expansion Fan at Mach 2.3 ○Zhang Hao ¹ , Zhang Yue ¹ , Tan Hui-jun ¹ (¹ Nanjing University of Aeronautics and Astronautics)

1C08	Control of Unsteadiness in Shock Wave/Boundary Layer Interaction by Using a Concave Surface ○Xue Hongchao ¹ , Zhang Yue ¹ (¹ Nanjing University of Aeronautics and Astronautics)
1C09	Large-Amplitude Gust Response Analysis of Finite Wings via Force Partitioning Method ○Yang Zheng ¹ , Yuting Dai ¹ (¹ Beihang University)

14:30 - 15:50 Aerodynamics and Design: Acoustics (1)
Chair: Wonju Jeon (KAIST)

1C10	Early-Stage Design Methodology for an Unmanned Aerial Vehicle with Rocket-Assisted Take-Off ○Kang Heejeong ¹ , Jeonghwan Kim ¹ , Kwanjung Yee ¹ (¹ Seoul National University)
1C11	An Efficient Hybrid CFD/VPM/FW-H Framework for Rotor Aerodynamic Noise Prediction ○Yonghua Liu ¹ , yongjie Shi ¹ , yang Shen ¹ , guohua Xu ¹ (¹ Nanjing University of Aeronautics and Astronautics)
1C12	Low-frequency broadband vibration damping of plate structures using waveguide absorbers based on spiral acoustic black holes ○Taehwan Son ¹ , Wonju Jeon ¹ (¹ Korea Advanced Institute of Science and Technology)
1C13	Aeroacoustic Analysis around a Two- and Three-dimensional Circular Cylinder using a Time-varying Point Source ○Koki Tashima ¹ , Hiroaki Fujiwara ¹ , Yoshiharu Tamaki ¹ , Taro Imamura ¹ (¹ The University of Tokyo)

16:00 - 17:00 Aerodynamics and Design: Acoustics (2)
Chair: Natsuki Tsushima (Kyushu University)

1C14	Effects of Launch Pad Inclination on Jet Acoustic Loads during Liftoff ○Sejin Ki ¹ , Jeongwoo Ko ¹ (¹ Korea Aerospace University)
1C15	A Rapid Sonic Boom Propagation Method Based on Neural Network ○Shiyue Fu ^{1,2} , Zhonghua Han ^{1,2} , Qing Chen ^{1,2} , Keshi Zhang ^{1,2} (¹ School of Aeronautics, Northwestern Polytechnical University , ² National key Laboratory of Aircraft Configuration Design)
1C16	Active Noise Control on Beating Frequency Noise of Multi-Rotor for AAM ○Jintae Kim ¹ , Jong-Seob Han ¹ , Joong-Kwan Kim ² , Chisung Oh ³ (¹ Chungnam National University , ² Hanseo University , ³ Hyundai Motor Company)

Room D (Main Hall)

10:20 - 12:00 Dynamics/Control/Avionics: Guidance and Control (1)

1D01	Passenger Pooling in On-Demand Urban Air Mobility: Trade-offs between Passenger Service Quality and Operational Efficiency ○Geon Woo Kevin LEE ¹ , Sang Hyun KIM ¹ (¹ Korea Aerospace University)
1D02	Identifying critical airport groups in air transport networks ○Wenhao Ding ¹ , Eri Itoh ¹ (¹ The University of Tokyo , ² Department of Aeronautics and Astronautics)
1D03 (Online)	Evasive Maneuver Decision-Making for Aircraft under Multi-Missile Attacks An Zhang ^{1,2} , ○Yanlong Han ¹ , Tianle Hou ¹ , Wenhao Bi ¹ (¹ School of Aeronautics, Northwestern Polytechnical University , ² National Key Laboratory of Aircraft Configuration Design)
1D04	Landing Trajectory Planning for Reducing the Descent Angle of Thrust-Loss Aircraft ○Hayate Kamiya ¹ , Masaki Takahashi ¹ (¹ Graduate School of Science and Technology, Keio University)
1D05	Vector Reference Governor-Based Docking Control for Proximity Operations of Orbital Transfer Vehicle ○Jung Heechul ¹ , Kim Changmin ¹ , Ko Sangho ¹ , Park Seungwoo ² , Lee Joonwon ² (¹ Korea Aerospace University , ² Hanwha Aerospace Co. Ltd.)

13:00 - 14:20 Dynamics/Control/Avionics: Guidance and Control (2)

1D06	Real-Time Return Guidance Trajectory Generation for Suborbital Spaceplane Using Bezier Curves with Way Points ○Ayumu Yanagisawa ^{1,2} , Takahiro Fujikawa ^{3,4} , Hideyuki Taguchi ^{1,2} (¹ Department of Mechanical and Aerospace Engineering , ² Tokyo University of Science , ³ Department of Aeronautics and Astronautics , ⁴ The University of Tokyo)
1D07	Footprint-Maximized Attitude Planning for Formation Flying SIGINT Satellite Mission ○Kim Jiwoong ¹ , Choi Sujin ¹ (¹ Korea University of Technology and Education)
1D08	Physics-Constrained Validation of LLM-Generated Rewards for Reinforcement Learning-Based Spacecraft Rendezvous ○Taehwa Kim ¹ , Andrew Jaeyong Choi ¹ (¹ Gachon University)
1D09 (Online)	Robust Wind-Field Reconstruction and Tracking Control for Shipborne Solar UAVs ○Yu Leheng ¹ , Zhou Zhou ¹ (¹ Northwestern Polytechnical University)

14:30 - 15:50 Dynamics/Control/Avionics: Guidance and Control (3)

1D10	Optimal Post-Avoidance Recovery Control of a Quadrotor ○Shota Araki ¹ , Yuki Ueyama ¹ , Masanori Harada ¹ (¹ National Defense Academy of Japan)
1D11	Aircraft Minimum-Fuel Trajectory Optimization Using the Birkhoff Pseudospectral Method ○Masanori Harada ¹ , Shota Araki ¹ , Yuki Ueyama ¹ (¹ National Defense Academy of Japan)
1D12	Switching Structure Boundary Identification in Time-Optimal Spacecraft Attitude Maneuvers under Box Constraints ○Jin Lee ¹ , Donghun Lee ¹ (¹ Korea Advanced Institute of Science and Technology (KAIST))

1D13	Approximate Minimum Time Closed-form Solution for Small Angle Slew Maneuver ○Yoonill Lee ¹ , Jiwon Lee ¹ , Donghun Lee ¹ (¹ Korea Advanced Institute of Science and Technology(KAIST))
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16:00 - 17:00 **Dynamics/Control/Avionics: Guidance and Control (4)**

1D14	Simultaneous Estimation of Wind and Longitudinal Aircraft Model Using Convolutional Neural Network ○Duc Thang Nguyen ¹ , Atsushi Satoh ¹ , Yoshimasa Ochi ¹ (¹ Department of Aerospace Engineering, National Defense Academy)
1D15	Rapid Homing Guidance Law with Neural Network-Based Uncertainty Compensation ○Min-Woo Cho ¹ , Sung-Il Jun ¹ , Bong-Gyun Park ¹ , Tae-Hun Kim ² (¹ Gyeongsang National University , ² Korea Aerospace University)
1D16	Toward Uncertainty-Aware UAV Guidance in Gas Dispersion Environments under Sparse Sensing ○Jeonghun Lee ¹ , Kihoon Lim ¹ , Cheolhyeon Kwon ¹ , Hyondong Oh ² (¹ Ulsan National Institute of Science and Technology , ² Korea Advanced Institute of Science and Technology)

Room E (Mid Size Hall)

10:20 - 12:00 **Aerodynamics and Design: Wind Tunnel Testing(1)**

Chair: Yuki Takeda (Iwate University)

1E01	Experimental Study of Bio-inspired Flapping Wings: Lift Generation, Complex Trajectory Effect SeungUk Lee ¹ , ○Jong-Seob Han ¹ (¹ Chungnam National University)
1E02	A Study on Geometry Optimization of Corrugated Airfoils for Maximized Aerodynamic Performance at Ultralow Reynolds Number Lee Hyunbeom ¹ , ○Han Jong-seob ¹ (¹ Chungnam National Univ., Aerospace Engineering)
1E03	Truss-Structured Six-Component Internal Balance Using Semiconductor Strain Gauges for Mach 6 Ludwig Tube Testing ○Han Minhyun ¹ , Kim Eunju ¹ , Park Soo Hyung ¹ (¹ Konkuk University)
1E04	Active Flow Control for Drag Reduction on a Rotorcraft Fuselage: A Combined Wind Tunnel Experiment and CFD CHANYOUNG KIM ¹ , OSOOHYUNG PARK ¹ (¹ Konkuk University)
1E05	Implementation of Wind Tunnel Experiment for a Roadable Aircraft using a FDM 3D Printer Technology ○Seiichiro Morizawa ¹ , Yusuke Shinzato ¹ (¹ National Institute of Technology, Okinawa College)

13:00 - 14:20 **Aerodynamics and Design: Wind Tunnel Testing(2)**

Chair: Jong-Seob Han (Chungnam National University)

1E06	Aerodynamic Deceleration of Sounding Rockets Using a Deployable Device During Return Flight ○Yuta Narahara ¹ , Katsuyoshi Fukiba ¹ , Yusuke Maru ² (¹ Shizuoka University , ² Japan Aerospace Exploration Agency)
1E07	Aerodynamic Characteristics of the Ishii Airfoil at Low Reynolds Number Flow with Turbulence ○Hiroya Nagai ¹ , Takamasa Kikuchi ² , Kosei Onoguchi ¹ , Keisuke Asai ² (¹ Nihon University, Graduate School of Science and Technology , ² Nihon University, College of Science and Technology)
1E08	Wind Tunnel Investigation of Longitudinal Static Margin Variation in Black-tailed Gull through Tail Morphing ○Yoshiharu TANAHASHI ¹ , Junya KANEMARU ¹ , Tadashige IKEDA ¹ , Naoko KISHIMOTO ² , Masato TAMAYAMA ³ , Yasuko IWAMI ⁴ , Naoki TOMITA ⁴ (¹ Chubu University , ² Kwansei Gakuin University , ³ Japan Aerospace Exploration Agency , ⁴ Yamashina Institute for Ornithology)
1E09	Measurement of the Influence Range of Drone Propeller Airflow in a Wind Tunnel ○Daiki Matsumura ¹ , Dai Itabashi ¹ , Ryo Kawaguchi ¹ , Takamasa Kikuchi ² (¹ Nihon University, Graduate School of Science and Technology , ² Nihon University, College of Science and Technology)

14:30 - 16:10 **Aerodynamics and Design: Wind Tunnel Testing(3)&Flow Visualization**

1E10	Flow Separation Control Around an Airfoil Using Plasma Actuator Driven by Low-voltage and Low-power Supply ○Hayate Kanehama ¹ , Shintaro Sato ¹ , Naofumi Ohnishi ¹ (¹ Tohoku University)
1E11	Flow state discrimination based on analysis of subspace extracted from wall pressure fluctuation for active flow control ○Rei Sasaki ¹ , Shintaro Sato ¹ , Yoshitsugu Naka ² , Naofumi Ohnishi ¹ (¹ Tohoku University , ² Meiji University)
1E12	Experimental Study of Variable-Incidence Vortex Generators on a Thick Airfoil with Leading-Edge Roughness ○Hangyu Lee ¹ , Donggeun Kim ¹ , Seongwoo Park ¹ , Jong-Seob Han ¹ (¹ Chungnam National University)
1E13	Application of Glow Discharge in Hypersonic Flow Density Measurement ○VAN NGHIA CAO ¹ , HAJIME ITOH ¹ , MAKOTO MIZOGUCHI ¹ (¹ National Defense Academy of Japan)
1E14	Boundary Layer Transition Control in Supersonic Flow ○Mahiro Nishihara ¹ , Shimon Ito ¹ , Takeshi Kanda ¹ (¹ Chubu University)

Room F (Mid Size Hall)

11:00 - 12:00 **Combustion and Propulsion: Spacecraft Propulsion(1)**

1F01	Thrust Performance of the Air-breathing Supersonic Arcjet ○Kazuki Manabe ¹ , Yuteng Hu ¹ , Koichi Mori ¹ (¹ Osaka Metropolitan University)
1F02 (Online)	Multi-Objective Design Optimization of Aerospace Turbopumps via a Variable-Fidelity Bayesian Framework ○Wei Zhang ^{1,2} , Jia Li ³ , Bin Li ³ , Lei Shi ¹ (¹ Northwestern Polytechnical University , ² Shaanxi Aerospace and Astronautics Propulsion Research Institute , ³ Chang'an University)
1F03	Effect of Cathode Material on the Discharge and Plume Characteristics of a 1 W-Class Vacuum Arc Thruster ○Jaeyeon Hwang ¹ , Holak Kim ¹ , Stéphane Mazouffre ² , Etienne Michaux ² (¹ Pusan National University, Busan, Republic of Korea , ² CNRS, ICARE, Orléans, France)

13:00 - 14:00 Combustion and Propulsion: Spacecraft Propulsion(2)

Chair: Holak Kim (Pusan National University)

1F04	Plume Behavior Prediction of Water-Fuelled Hall Effect Thruster Using Spacecraft Plasma Interaction Software ○Yoon Sub SHIN ¹ , Kyun Ho LEE ¹ (¹ Sejong University)
1F05	Numerical Predictions of Combustion and Performance for Small MMH-NTO Bipropellant Thruster ○Minkyu SUNG ¹ , Kyun Ho LEE ¹ , Seung Yong MIN ² , Moon Jin JEON ² , Rho Shin MYONG ³ (¹ Sejong University , ² Korea Aerospace Research Institute , ³ Gyeongsang National University)
1F06	Development of Spacecraft Refueling Breadboard Model for Ground Test ○Jonggil LEE ¹ , Kyun Ho LEE ¹ , Do-Jin Jung ² , Dong Young Lee ² , Jong Yul Kim ² , Hae Dong Kim ^{2,3} , Hang Gyu Cho ⁴ , Ho Seung Yoon ⁴ (¹ Sejong University , ² WorkerInSpace Inc. , ³ Gyeongsang National University , ⁴ Space Solutions Co., Ltd.)

14:10 - 15:50 Combustion Analysis &OS: Aviation Propulsion and Energy

1F07	Impinging Jet Test of Low-Toxicity Hypergolic Propellants Using a Pentad Injector According to Hydrogen Peroxide Concentration ○Eunkyu CHOI ¹ , Jinhwan JEOUNG ¹ , Jini YANG ¹ , Minha HWANG ¹ , Jongkwang LEE ¹ (¹ Dept. of Mechanical Engineering, Hanbat National Univ., Korea)
1F08	Development of Improved Low-Toxicity Hypergolic Blended Fuels Using Hydrocarbon Fuels and Ionic Liquids ○JinHwan JEOUNG ¹ , EunKyu CHOI ¹ , JiNi YANG ¹ , MinHa HWANG ¹ , JongKwang LEE ¹ (¹ Hanbat National University)
1F09	Research on High-frequency combustion instability in rocket engines ○Shogo Suzuki ¹ , Kazushige Tanimoto ¹ , Takai Keiichiro ¹ , Natsuhara Ayaka ¹ , Takeshi Kanda ¹ (¹ Chubu University)
1F10	Development of a Rotational Pulse-Echo Laser Ultrasonic Propagation Imaging System for Diagnosing CFRP Combustion Chamber in Reusable Launch Vehicle ○Lee Kyu Jin ¹ , Lee Jung Ryul ¹ (¹ Korea Advanced Institute of Science and Technology (KAIST))
1F11	Thrust Evaluation of Ultrasonic Propulsion Systems ○Kosuke Fujii ¹ , Koichi Mori ¹ (¹ Osaka Metropolitan University)

Room G (Small Hall)

10:20 - 12:00 Structures and Materials: Composite Structures(1)

Chair: Masaaki Nishikawa (Kyoto University)

1G01	Wrinkle Prediction in CFRTP using a Membrane-Bending Stiffness Decoupled Finite Element Model ○Heesung Na ^{1,2} , Sang-Woo Kim ^{1,2,3} (¹ Department of Aerospace and Mechanical Engineering , ² Department of Smart Air Mobility , ³ Department of Aeronautical and Astronautical Engineering)
1G02	Probabilistic Damage Model-Based Fatigue Life Scatter Prediction of CFRP Composites ○Jinseok Park ^{1,2} , Sang-Woo Kim ^{1,2,3} (¹ Department of Aerospace and Mechanical Engineering , ² Department of Smart Air Mobility , ³ Department of Aeronautical and Astronautical Engineering)
1G03	Electrochemical–Mechanical Characteristics of Biphasic Structural Battery Electrolytes with Varying Epoxy–Liquid Electrolyte Ratios ○Young-Cheol Kim ^{1,2} , Sang-Woo Kim ^{1,2,3} (¹ Department of Aerospace and Mechanical Engineering , ² Department of Aeronautical and Astronautical Engineering , ³ Department of Smart Air Mobility)
1G04	Mechanical Properties of Unidirectional T800/Y69 and T700/E51 Composites at 25 °C and 135 °C ○Tao-Huan Xiong ¹ , Jun-Jiang Xiong ¹ , Jun-Hong Wang ¹ (¹ Beihang University, China)
1G05	Effect of Surface Scratch Damage on Fatigue Behaviour of Hybrid Laminated Composites ○Tong Yang ¹ , Junjiang Xiong ¹ (¹ Beihang University)

13:00 - 14:20 Structures and Materials: Composite Structures(2)

Chair: Nozomu Kogiso (Osaka Metropolitan University)

1G06	Minimal unit cell based uncertainty quantification method of effective thermal conductivities for textile composites ○Jian-Jun Gou ¹ , Yue-Er Sun ¹ , Yu-Cheng Yang ¹ , Chun-Lin Gong ¹ (¹ Northwestern Polytechnical University)
1G07	Estimation of Density in Carbon/Phenolic Composites Using Micro-CT and FE-SEM Images ○Sukyeong Jang ¹ , Nara Han ¹ , Gyumin Lee ¹ , Hyebin Nam ¹ , Eui Sup Shin ¹ (¹ Department of Aerospace Engineering, Jeonbuk National University)
1G08	Comparative Study on Electromagnetic Riveted Joints of Thermoplastic and Thermoset Composite Laminates ○Zhenfei Du ¹ , Zengqiang Cao ¹ , Tian Xia ¹ , Jiawei Su ¹ , Lubin Huo ¹ (¹ Northwestern Polytechnical University)
1G09	Influence of wrinkled layering angle on the installation damage of CFRP/Ti bolt interference fit connection structure ○Meng Du ¹ , Zengqiang Cao ¹ (¹ Northwestern Polytechnical University)

14:30 - 15:50 Structures and Materials: Structural Dynamics and Control

Chair: Jae-Hung Han (KAIST)

1G10	Design and Dynamic Characterization of a Passive Compliant Joint for Low-Impact Modular Assembly of Large Space Structures ○Sori Chon ¹ , Gilsu Park ¹ , Dayeong Kang ¹ , Taegyu Kim ² (¹ Chosun University , ² Space Lab)
1G11	Microstructure-Informed Dynamic Characterization of Additively Manufactured Ti-6Al-4V via Non-Contact Modal Testing and PSD-Based Analysis ○Shiho Yamamoto ¹ , Ryo Higuchi ² , Fujio Tsumori ¹ , Natsuki Tsushima ^{1,2} (¹ Kyushu University , ² The University of Tokyo)
1G12	Viscoelastic Meso-Micromechanical Modeling of Continuous-Fiber 3D-Printed CFRP for Effective Stiffness and Damping Prediction ○Ryosuke Kawamura ¹ , Naruki Ichihara ¹ , Fujio Tsumori ¹ , Natsuki Tsushima ^{1,2} (¹ Kyushu University , ² The University of Tokyo)
1G13	Structural Validation of the “Mirzo Ulugbek” 6U CubeSat Engineering Model ○Hery Steven Mindarno ¹ , Lefort Gauvain Louis Alferd ¹ , Azimjonov Khabibullokh Olimjon Ugli ¹ , Iwase Tomoya ¹ , Sarode Aashish Sudam ¹ , Mehmet Esit ¹ , Schulz Victor ¹ , Cordova Alarcon Jose Rodrigo ¹ , Masui Hirokazu ¹ , Hamada Kaito ¹ , Yamauchi Takachi ¹ , Orger Necmi Cihan ¹ , Kitamura Kentaro ¹ , Cho Mengu ¹ (¹ Kyushu Institute of Technology)

Room H (101)

10:20 - 12:00 **System Engineering: Power and Thermal Management Systems**

Chair: Yusuke Mihara (SIST)

1H01	Thermal Modeling, Validation, and CHT-Based Channel Optimization for Integrated Servo Motor Pumps in Rocket TVC Systems ○Dong Chen ¹ , Jian Fu ¹ , Lyu Dingchong ¹ (¹ Beihang University)
1H02	Tuning Methodology of PI Control Gains for Precise Feedback Thermal Control of Advanced Spaceborne Payloads ○Yu-Young Youn ¹ , Hye-In Kim ¹ , Bong-Geon Chae ¹ , Jang-Joon Lee ² , Hyun-Ung Oh ^{1,3} (¹ STEPLab., LTD , ² Korea Aerospace Research Institute , ³ Korea Aerospace University)
1H03	LSTM Method for Performance Degradation Identification of Fuel Thermal Management System ○Jihao Zhao ^{1,2,3} , Qihang Liu ^{4,5} , Jie Wen ^{1,2,3} , Zhiwei Liu ^{2,3} , Mengchen Li ^{1,2,3} , Laihe Zhuang ^{1,2,3} (¹ Research Institute of Aero-engine, Beihang University, Beijing , ² Tianmushan Laboratory, Hangzhou , ³ International Innovation Institute, Beihang University, Hangzhou , ⁴ Shanghai Institute of Space Propulsion, Shanghai , ⁵ Shanghai Engineering Research Center of Space Engine, Shanghai)
1H04	Numerical Analysis of a Halbach-Array-Based Axial Flux Motor for a Electrically-Driven Propeller Aircraft ○Ryuki SHIMOKAWA ¹ , Zhong LEI ¹ (¹ Suwa University of Science)
1H05	Preliminary Thermal Control System Design for a Single-Launch Orbital Data Center ○Se-Eun Koo ¹ , Jae-Hung Han ¹ (¹ Korea Advanced Institute of Science and Technology (KAIST))

13:00 - 14:00 **System Engineering: Software Engineering & AI Applications(1)**

1H06	LLM-Assisted CAD Workflow for Rapid Conceptual-to-Detailed Design Transition of Flapping Mechanisms in Bird-Inspired Ornithopters Yang Hyeon-Ho ¹ , ○Ko Hyeong-Seok ¹ , Han Jae-Hung ¹ (¹ Korea Advanced Institute of Science and Technology (KAIST))
1H07	LLM-Explainable Safety-Shielded Reinforcement Learning for Efficient UAV Local Replanning ○Boseong Ko ¹ , Taehyun Ko ¹ , Jangyeong Oh ¹ , Seongim Choi ¹ (¹ Gwangju Institute of Science and Technology (GIST))
1H08	PINN-Based Lambert Solver for Autonomous Sun-Synchronous Orbit Maintenance ○Yujin Jeong ¹ , Boyoun Sohn ¹ , Donghun Lee ¹ (¹ Korea Advanced Institute of Science and Technology)

14:10 - 15:10 **System Engineering: Software Engineering & AI Applications(2)**

1H09	Multimodal Perception for Battlefield Situation Awareness Using UAV-UGV Systems with Sim-to-Real Validation ○Taehyun Ko ¹ , Seongim Choi ¹ , Boseong Ko ¹ , Jangyeong Oh ¹ (¹ GIST(Gwangju Institute of Science and Technology))
1H10	Autoencoder-based Thrust Fault Detection for Multicopter UAVs Using Control-Aware Loss and Adaptive Thresholding ○Doyun Kim ¹ , Minjun Jang ¹ , Yeonghyen Mo ¹ , Seungkeun Kim ¹ , Jinyoung Suk ¹ , Donghoon Seo ¹ (¹ Chungnam National University)
1H11	LSTM-Based Multi-Horizon Trajectory Prediction for UAM Risk Awareness ○Junyong Shin ¹ , HyeonJun Lee ¹ , Jae-Woo Lee ¹ (¹ Konkuk University)

15:20 - 16:20 **Structural and Materials: Structural Dynamics and Control**

1H12	System-Level Development and Verification Flow of the Disk-RDRE Propulsion System ○Jeong-Woo Eun ¹ , Si-Yoon Kang ¹ , Min-Seon Jo ¹ , Woo-Seok Han ¹ , Gyeong-Ui Mo ¹ , Chang-Su Ha ¹ , Jiwon Kim ¹ , Su-Wan Choi ¹ , Geun-Jeong Lee ¹ , Kyu-oh Shim ¹ , Jeong-Yeol Choi ¹ (¹ Pusan National University)
1H13	Systems Engineering-Based Critical Design and Verification Planning for the Second Stage of a University-Led Sounding Rocket ○Jiwon Kim ¹ , Si-Yoon Kang ¹ , Min-Seon Jo ¹ , Chang-Su Ha ¹ , Su-Wan Choi ¹ , Woo-Seok Han ¹ , Jeong-Woo Eun ¹ , Geun-Jeong Lee ¹ , Gyu-oh Shim ¹ , Gyeong-Ui Mo ¹ , Juhyen Sim ² , Minjun Cha ² , Jeong-Yeol Choi ¹ (¹ Pusan National University , ² Koreanair)
1H14	A System of Systems Architecture for Resilience-Oriented Evaluation of Aircraft Health Management Using UAF and Causal Loop Diagrams ○Takuro Koizumi ^{1,2} , Nozomu Kogiso ¹ (¹ Osaka Metropolitan University , ² Mitsubishi Heavy Industries Ltd.)

Room I (102)

13:00 - 14:20 **Space Science and Applications: Launch Vehicles**

Chair: Hiroaki Tanaka (National Defense Academy of Japan)

1I01	High-Resolution Land-Cover Segmentation from Coarse Labels via Constrained Self-Training ○Dongoo Lee ¹ , Yeonju Choi ² (¹ Korea University of Technology and Education , ² Korea National Defense University)
1I02	Comparative Development of Korea's Naro-Nuri and India's PSLV-GSLV: A Neoclassical Realist Analysis under International Constraints ○Boyoung Choe ^{1,2} (¹ Chungnam National University , ² National Research Council of Science and Technology in Korea)
1I03	Development Process and Flight Demonstration of a Small-scale Two-stage Sounding Rocket System ○Si-Yoon Kang ¹ , Min-Seon Jo ¹ , Su-Wan Choi ¹ , Geun-Jeong Lee ¹ , Chang-su Ha ¹ , Woo-seok Han ¹ , Kyu-oh Shim ¹ , Jiwon Kim ¹ , Jeong-Woo Eun ¹ , Jeong-Yeol Choi ¹ (¹ Pusan National University)
1I04	Numerical Study on the Effect of Rocket Plume Afterburning on Pressure and Thermal Loads on an Offshore Launch Platform ○WonJae Lee ¹ , KyungHwan Han ¹ , SangYoon Lee ¹ , HyoungJin Lee ¹ (¹ Inha university)

14:30 - 16:10 **Space Science and Applications: Earth Observation & Lunar & Planetary Exploration**

1I05	Development of the Korean Systems Engineering Handbook for the Success of Domestic Satellite Missions ○Jeongheum Im ¹ , Hyeon-Jin Jeon ¹ , Bonggu Jeong ¹ , Choonwoo Lee ¹ , Gysun Kim ¹ , Changkwon Cho ¹ , Seonho Lee ² (¹ Korea Aerospace Research Institute , ² Kyunghee University)
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1106	Evaluating Transformer-Based Residual Ionospheric Error Corrections Across Ionospheric Asymmetries: Feature Attribution and Temperature-level Empirical Analysis ○Jihyeok Park ¹ , Jaehee Chang ¹ , Noah Minchan Kim ¹ , Jiyun Lee ¹ (¹ KAIST)
1107	Information-Theoretic Spectral Baseline Design for ISRU-oriented Lunar Mineral Mapping Jakub Leš ^{1,2} , ○Manfred Gawlas ³ (¹ University of Wrocław , ² Creotech Intruments S.A. , ³ Wrocław University of Technology , ⁴ European Organization for Nuclear Research [CERN])
1108	Real-Time Semantic-Geometric Traversability Mapping for Planetary Rover Navigation ○Jaeyoung Lee ¹ , Andrew Jaeyong Choi ¹ (¹ Gachon University)
1109	Quantifying and Correcting Rigid-Body Traction Bias in Lunar Rover Simulation: A Real-Time Bekker–Janosi Terramechanics Framework over IsaacSim PhysX Jisuk Lee ¹ , Dahyoung Jeon ¹ , ○Beck Eugene ¹ (¹ SIM2REAL Inc.)

Room J (104)

10:20 - 12:00 Dynamics/Control/Avionics: Satellite Attitude Control

1J01	Numerical Investigation of micro-PDE-induced Transient Flowfield Dynamics in a Scramjet Combustor ○Min-Seon Jo ¹ , Si-Yoon Kang ¹ , Su-Wan Choi ¹ , Jeong-Yeol Choi ¹ (¹ Pusan National University)
1J02	Turbulent Combustion Modeling via Graph Neural Network ○JUNSU SHIN ¹ (¹ Korea National University of Transportation)
1J03	Manual and Automatic Mass Balancing System for Satellite Attitude Control Testbed ○Juhyeong Park ¹ , Byeonghyeon Cho ¹ , Gyeongsu Park ¹ , Hyochoon Bang ¹ , JongKuk Lee ² , Taeseong Song ² , Minyoung Kim ² , Deokki Song ² (¹ Korea Advanced Institute of Science and Technology , ² LG Nex1)
1J04	Real-Time Implementation and Performance Evaluation of a Motion Estimation Method for Non-Cooperative Objects ○Sota MORITO ¹ , Toshiki OHSAWA ¹ , Katsuyoshi TSUJITA ² , Kazuhide KODEKI ³ , Daiki HIGASHIYAMA ³ , Naoki IMAMURA ³ , Takeya SHIMA ³ (¹ Graduate School of Sustainability Science, Tottori University , ² Department of Mechanical and Engineering, Tottori University , ³ Advanced Technology R&D Center, Mitsubishi Electric Corporation)
1J05	Development and Functional Evaluation of a Hardware Simulator for Ground Testing of Spacecraft ○Toshiki OSAWA ¹ , Sota MORITO ¹ , Katsuyoshi TSUJITA ² , Kazuhide KODEKI ³ , Daiki HIGASHIYAMA ³ , Naoki IMAMURA ³ , Takeya SHIMA ³ (¹ Graduate School of Sustainability Science, Tottori University , ² Department of Mechanical and Engineering, Tottori University , ³ Advanced Technology R&D Center, Mitsubishi Electric Corporation)

13:00 - 14:00 Dynamics/Control/Avionics: Flight Simulation(1)

1J06	Analysis of SLVST Two-Stage Rocket Flight Characteristics Using RocketPy-Based Six-Degree-of-Freedom Simulations ○Kyu-oh Shim ¹ , Min-Seon Jo ¹ , Geun-Jeong Lee ¹ , Si-Yoon Kang ¹ , Su-Wan Choi ¹ , Chang-su Ha ¹ , Woo-Seok Han ¹ , Eun-Chong Lim ² , Jung-Chi Kim ² , Jeong-Yeol Choi ¹ (¹ Pusan National University , ² INNOSPACE)
1J07	Autonomous Landing Algorithm for a Lift & Cruise VTOL on a Moving USV Using Multi-Sensor and Model Predictive Control ○Daehan Won ^{1,2} , Seungkeun Kim ² (¹ Korea Aerospace Research Institute , ² chungnam national university)
1J08	Physics-Based LiDAR Sensor Noise Modeling and Simulation for Autonomous Navigation in Low-Visibility Environments ○KangSoo Ryu ¹ , Sichan Sung ¹ , Hyeong-Geun Kim ¹ , Sangkyung Sung ¹ (¹ Konkuk University)

14:10 - 15:10 Dynamics/Control/Avionics: Flight Simulation(2)

1J09	Correction-Oriented System Identification Framework for AAM Flight-Dynamics Simulation: A VTOL Validation Study ○Sangho Lee ² , LV Thang Nguyen ¹ , Gumoon Jeong ² , Jae-Woo Lee ² (¹ Konkuk Aerospace Design-Airworthiness Institute , ² Konkuk University)
1J10	Comparative Evaluation of Flight Characteristics of a Hybrid VTOL UAV Through Simulation and Flight Experiments ○ABE Kirato ¹ , YANO Yuya ¹ , TANAHASHI Yoshiharu ¹ (¹ Chubu University)
1J11	CBBA-PR-Based Task Allocation for Heterogeneous UAV Wildfire Response Considering Arrival-Time Risk and Information Value ○Jaeyeon Ka ¹ , Dongjin Lee ¹ (¹ Hanseo university)

Room K (105)

10:20 - 12:00 Combustion and Propulsion: Cooling Systems

1K01	Real-Gas Compressible Flow Analysis Framework for High-Pressure Cryogenic Coolant Flows in Liquid Rocket Engines ○Chang-su Ha ¹ , Si-Yoon Kang ¹ , Jeong-Yeol Choi ¹ , Inchul Lee ² , Wonjeong Hyun ² (¹ Pusan National University , ² Hanwha Aerospace)
1K02 (Online)	An LTNE-TPMM-Based Numerical Simulation Method for Liquid Phase-Change Transpiration Cooling in Porous Media and Its Application to Representative Configurations ○Xinran Fu ¹ , Kaixuan Zhang ¹ , Zhengping Zou ^{1,2} , Chen Yiming ^{1,2} (¹ Research Institute of Aero-Engine, Beihang University, Beijing , ² Natl. Key Lab. of Sci.&Tech. on Aero-Engine Aero-Thermodynamics)
1K03	CFD-Based ROM Development for Rapid Prediction of Transpiration Cooling Effectiveness ○Jisu Park ¹ , Changwoo Kang ¹ (¹ Jeonbuk National University)
1K04	Experimental Investigation of Heat Transfer Characteristics and Empirical Correlation Development for Supercritical LNG in Regenerative Cooling Channels ○Min Seong Kong ¹ , Donghui Ha ¹ , Inchul Lee ² , Yongchan Kim ² , Hyoung Jin Lee ¹ (¹ Inha University , ² Engine R&D Team, Space Business Group, Hanwha Aerospace)
1K05	Investigation on Flow and Heat Transfer Characteristics of Cryogenic Methane in Microchannel Circular Tubes at Supercritical Pressure ○Ruitao Zhang ¹ , Xiaojing Yu ¹ , Yan Ba ¹ , Yang Liu ¹ , Feng Gao ¹ , Jiarui Yao ¹ (¹ Northwestern Polytechnical University)

13:00 - 14:00 Combustion and Propulsion: Fuels / Fuel Injection (1)

1K06	Experimental Study of Ram Mode Operation in a Coreless Rotating Detonation Scramjet ○Su-Wan Choi ¹ , Min-Seon Jo ¹ , Seunghyun Jo ¹ , Si-Yoon Kang ¹ , Jeong-Yeol Choi ¹ (¹ Pusan National University, Busan, Republic of Korea)
1K07	Single-Injection Spray Characteristics of a Biswirl Coaxial Injector under Elevated Ambient Pressure ○Hadong Jung ¹ , Kyubok Ahn ¹ (¹ Chungbuk National University)
1K08	Heat transfer enhancement of liquid nitrogen cooling using twisted tape ○Kotaro Tanabe ² , Katsuyoshi Fukiba ² , Hiroaki Kobayashi ¹ (¹ Japan Aerospace Exploration Agency , ² The University of Shizuoka)

14:10 - 15:10 Combustion and Propulsion: Fuels / Fuel Injection (2)

1K09 (Online)	Fuel Injection Strategies for High-Mach-Number Scramjets ○Yuan Peng ¹ , Jinglei Xu ¹ (¹ Nanjing University of Aeronautics and Astronautics)
1K10	Effects of Ultrafine Bubble Addition on the Spray and Combustion Characteristics of Coconut Oil-Derived Biofuel ○Shinichiro Ogawa ¹ , Takuto Hongo ¹ , Sarunu Thawonphat ¹ , Huynh Phuong Uyen Nguyen ¹ , Yasuaki Maeda ¹ (¹ Osaka Metropolitan University)
1K11	Frequency Response of a Movable Pintle Injector with Large Static Friction for Thrust Control of a Variable-Thrust Liquid Engine ○Yamato MATSUMOTO ¹ , Hiroaki KOBAYASHI ² (¹ The University of Tokyo , ² JAXA)

Room L (107)**10:20 - 12:00 Dynamics/Control/Avionics: Navigation (1)**

1L01	Abort-Safe Maneuver Guidance Strategy for Multi-Spacecraft Proximity Operations Under J2 Perturbation ○Chenglong Xu ¹ , Jihe Wang ¹ (¹ Sun Yat-sen University)
1L02	Robust LIO in Hazy and Degenerate Indoor Environments Using Deep Learning-Based Denoising and Minimal Measurements ○Sichan SUNG ¹ , Taehwan LEE ¹ , Dongha KWON ¹ , Kangsoo RYU ¹ , Seongwook HEO ¹ , Hyeong-Geun KIM ¹ , Sangkyung SUNG ¹ (¹ Konkuk University)
1L03	Maneuver Attribute Based Generation of Aggressive Flight Trajectories For Tracking Control ○DONG YEON HA ¹ , JUN YEONG CHOI ¹ , CHANG JU KIM ¹ (¹ Konkuk University, Korea)
1L04 (Online)	Collaborative Planning of Multiple Virtual Tubes for Multi-UAV Systems in Complex Environments An Zhang ^{1,2} , OTianle Hou ¹ , Yanlong Han ¹ , Wenhao Bi ^{1,2} (¹ School of Aeronautics, Northwestern Polytechnical University , ² National Key Laboratory of Aircraft Configuration Design)
1L05	Protection Level Computation for GNSS-based Real-time Precise Orbit Determination Using SSIM ○Jimin Do ¹ , Gihun Nam ¹ , Dongchan Min ² , Jiyun Lee ¹ (¹ KAIST , ² Stanford University)

13:00 - 14:40 Dynamics/Control/Avionics: Navigation (2)

1L06 (Online)	Research on Dynamic Collision Risk of Autonomous Operation of Aircraft in Complex Airspace ○Jiayi Guo ¹ , Di Shen ¹ (¹ Air Force Engineering University)
1L07	Performance Verification System for Navigation Algorithm – Method for Calculating Flight Parameters in Coordinate Transformation – ○Hiro Kondo ¹ (¹ Shinshu University)
1L08	Distance-Adaptive Feature Fusion for Stereo Vision-Based Relative Pose Estimation of Non-Cooperative Spacecraft ○Minhye Jeon ¹ , Dong-Hyun Cho ¹ (¹ Pusan National University)
1L09	Performance Evaluation of MEE-EKF for Measurement Robust GNSS/INS Integrated Navigation ○Juwon LEE ^{1,2} , Minhwan KIM ^{1,2} , Junsung LEE ^{1,2} , Hyeong-Geun KIM ^{1,2} , Sangkyung SUNG ^{1,2} (¹ Department of Aerospace Mobility Engineering, Konkuk University , ² Konkuk University, Seoul, Republic of Korea)
1L10	Vision-Based Terrain Relative Navigation via Multi-Biew Geo-Reconstruction for Mars Landing ○Min Hyeok Jeong ¹ , Hyo Choong Bang ¹ (¹ Korea Advanced Institute of Science and Technology)

14:50 - 16:30 Dynamics/Control/Avionics: Navigation (3)

Chair: Seiya Ueno (JAXA)

1L11	GNN-Based 3D–2D Wireframe Matching for Monocular Spacecraft Pose Estimation ○Seongho Lee ¹ , Daewoo Lee ¹ (¹ Pusan National University)
1L12	Joint Spacecraft State and Target Ephemeris Estimation for Optical Navigation in the Approach Phase of Saturnian System Exploration ○Grace Yedam Shin ¹ , Natnael S. Zewge ¹ , Bohyun Chang ¹ , Hyochoong Bang ¹ (¹ Korea Advanced Institute of Science and Technology)
1L13	Asynchronous-Aware EKF for Ballistic Missile Tracking with LEO Stereo Satellite Imagery ○Bohyun Chang ¹ , Man Jun Koh ¹ , Hyochoong Bang ¹ , Donghun Lee ¹ (¹ Korea Advanced Institute of Science and Technology)
1L14	LiDAR-Based ISS Relative Navigation Using Center-Corrected Position Estimation and Pose Graph Attitude Refinement ○Geemoon Noh ¹ , Daewoo Lee ¹ (¹ Pusan National University)
1L15	Instruction-Conditioned Diffusion Planning for Planetary Terrain Navigation ○Sehun Park ¹ , Andrew Jaeyong Choi ¹ (¹ Gachon University)

Room M (108)

10:20 - 12:00 Dynamics/Control/Avionics: ATM/CNS/UAM(1)

Chair: MARK BROWN (ENRI)

1M01	Evaluating the impact of space vehicle reentry operations on domestic air traffic in Japan ○Natsumi Inoue ¹ , Katsuhiro Sekine ¹ , Eri Itoh ¹ (¹ The University of Tokyo)
1M02	Sensitivity of Autopilot-Generated Climb Trajectories to Aircraft Weight and Wind Uncertainties ○Haruto TAGUCHI ¹ , Eri ITOH ¹ (¹ The University of Tokyo, Tokyo, Japan)
1M03	Beyond SORA v2.5: A Case Study of a Population-Density Threshold Framework for Drone Operational Risk Assessment ○Yota Iwatsuki ¹ , Akinori Harada ¹ , Shinichiro Higashino ¹ (¹ Department of Aeronautics and Astronautics, Kyushu University)
1M04	Multi-Objective Optimization of Cruise Altitude Adjustment Strategies for Contrail Mitigation Around a Persistent Contrail Hotspot in Japanese Airspace ○Katsuhiro Sekine ¹ , Tomoaki TATSUKAWA ² , Eri Itoh ¹ (¹ The University of Tokyo , ² Tokyo University of Science)
1M05	Evaluating the Impact of Runway Expansion and Surface Layout on Ground Traffic Flow at Narita Airport ○Sota Yamaguchi ¹ , Yoshiaki Kawagoe ² , Eri Itoh ¹ (¹ The University of Tokyo , ² Tohoku University)

13:00 - 14:40 Dynamics/Control/Avionics: ATM/CNS/UAM(2)

Chair: MARK BROWN (ENRI)

1M06 (Online)	Stochastic Departure Metering with Machine-learning Taxi-Time Predictors ○Chang LIU ¹ , Eri ITOH ¹ (¹ The University of Tokyo)
1M07	Asia-Pacific Air Transportation Networks under Large-Scale Airspace Constraints: Resilience Comparison of Japan, China, Korea and Australia ○Eri Itoh ² , Hitoshi Suzuki ¹ (¹ Institute of Geoeconomics , ² The University of Tokyo)
1M08	Considerations for macro-level domain selection within a hierarchical Urban Air Mobility Management ecosystem ○Jemima Louise Kamese ¹ , Sang Hyun Kim ¹ (¹ Korea Aerospace University)
1M09	Operational Constraints on Continuous Descent Operations in a Congested Terminal Maneuvering Area: A Case Study of Narita International Airport ○Alisha Kad ¹ , Eri Itoh ¹ (¹ University of Tokyo)
1M10	Air Traffic Management using Propagating Waves under Severe Weather Conditions ○Seiya Ueno ¹ , Adriana Andreeva-Mori ² (¹ JAXA , ² Osaka Metropolitan University)

14:50 - 16:30 Dynamics/Control/Avionics: ATM/CNS/UAM(3)

1M11	A Trajectory-Based Scoring Method for Identifying Visual Guidance Needs in Follow-the-Greens Airport Surface Operations ○Yota Iwatsuki ¹ , Akinori Harada ² , Shinichiro Higashino ² (¹ Mitsubishi Research Institute, Inc. / Kyushu University , ² Kyushu University)
1M12	Resilience-Oriented Emergency Air Traffic Optimization Using Deep Reinforcement Learning ○Reona Ishizuka ¹ , Akinori Harada ¹ , Shin-Ichiro Higashino ¹ (¹ Department of Aeronautics and Astronautics, Kyushu University)
1M13	An Eye-Tracking-Based Framework for Pilot Response Data Collection under Unexpected Intruder Encounters in Congested Terminal Areas ○Seok-ho KIM ¹ , Hak-Tae LEE ¹ (¹ Department of Aerospace Engineering, Inha University)
1M14	UAM Corridor Planning Based on Ground Risk Assessment Using Uncontrolled Descent Trajectory Simulation ○Seohyun Park ^{1,2} , Taeyun Kim ¹ , Hongsu Nam ^{1,2} , Hak-Tae Lee ^{1,2} , Jungwoo Cho ^{1,2} (¹ Department of Aerospace Engineering, Inha University , ² Program in Aerospace Systems Convergence, Inha University)
1M15	Feasibility Study of Surveillance of Aircraft Equipped with Portable ADS-B Transmitters Using High-Altitude Platform Stations ○Yutaka FUKUDA ^{1,2} , Tetsuya ASHIZUKA ¹ , Daisuke KUBO ¹ , Ryushun OKA ¹ (¹ Japan Aerospace Exploration Agency , ² Japan Radio Air Navigation Systems Association)

Room O (202)

10:20 - 12:00 Combustion and Propulsion: Engines(1)

Chair: Ryota Ito (University of Yamanashi)

1001	Characteristics of a Disk-shaped Liquid-Fueled Rotating Detonation Rocket Engine with Varying Mass Flow Rate ○Woo-Seok Han ¹ , Gyeong-Ui Mo ¹ , Si-Yoon Kang ¹ , Min-Seon Jo ¹ , Seunghyun Jo ¹ , Jeong-Yeol Choi ¹ (¹ Pusan National University)
1002	Experimental Evaluation of Gas-Gas Injector Configurations for GOx/GCH₄ Combustion Engine ○Jiwon Jeong ¹ , Hadong Jung ¹ , Yongsun Choi ¹ , Minsang Kim ¹ , Gihun Choi ¹ , Woongtae Jung ¹ , Jeongho Park ¹ , Junhyeong Lee ¹ , Yeonha Park ¹ , Kyubok Ahn ¹ (¹ Mechanical Engineering, Chungbuk National University)
1003	Experimental Investigation on a Methane Oxygen Triplex Injector for an Oxidizer-Rich Preburner ○Woongtae Jung ¹ , Hadong Jung ¹ , Yongsun Choi ¹ , Minsang Kim ¹ , Gihoon Choi ¹ , Jiwon Jeong ¹ , Jeongho Park ¹ , Junhyeong Lee ¹ , Yeonha Park ¹ , Kyubok Ahn ¹ (¹ Chungbuk National University)
1004	Numerical Investigation of Back-Pressure Control in a Diffuser-Ejector System for High-Expansion-Ratio Rocket Nozzle Testing ○Geun-Jeong Lee ¹ , Si-Yoon Kang ¹ , Min-Seon Jo ¹ , Chang-su Ha ¹ , Woo-Seok Han ¹ , Jeong-Yeol Choi ¹ (¹ PUSAN NATIONAL UNIVERSITY)
1005	Study on the Ejector Jet Mode of RBCC ○Kazushige Tanimoto ¹ , Rion Ito ¹ , Takeshi Kanda ¹ (¹ Chubu University)

13:00 - 14:00 Combustion and Propulsion: Engines(2)

Chair: JeongYeol Choi (Pusan National University)

1O06	Combustion Characteristics of 1MPa H2/N2O Rocket Engine ○Yuki Matsuda ¹ , Ryu Nakai ¹ , Mitsuki Miyazaki ¹ , Takeshi Kanda ¹ (¹ Chubu university)
1O07	Radial Shrinkage of W-Cu Throat Liners in SRMs: High-Pressure Experiments and Thermo-Structural Simulation ○Moding Peng ¹ , Yang Liu ¹ , Yiwen Guan ¹ , Yan Ba ¹ , zhichao Dong ¹ (¹ Northwestern Polytechnical University)
1O08	Research on the Application of Model-Based Fault Identification and Analysis Methods in Aero-Engine Control Systems. ○Ziqiang DENG ¹ , Min HUANG ^{1,2} , Jiaying SHI ¹ , Zhaojing WANG ⁴ , Chunping HU ³ , Xuejun LIU ¹ (¹ Beihang University , ² ReliaChina Technology Co., Ltd, Suzhou, China , ³ AECC Nanjing Aero-Propulsion Co., Ltd. , ⁴ AIDRC, Beijing, China)

14:10 - 15:10 Combustion and Propulsion: Engines(3)&Turbines

Chair: Junsu Shin (Korea National University of Transportation)

1O09	RANS-Based CFD Optimization of V-Gutter Flameholders in a Ramjet Combustor Sector ○Francesco Logrieco ^{1,2} , Kotaro Nakayama ^{1,2} , Kaito Hirose ^{1,2} (¹ The University of Tokyo , ² Department of Aeronautics and Astronautics)
1O10	Nitrogen Separation Effects on Thrust and Specific Impulse of a Liquefied Air Cycle Engine ○Ryota Ito ¹ (¹ University of Yamanashi)
1O11	Verification of a Decoupled Framework for Three-Dimensional Counterflow Conjugate Heat Transfer over a Flat-Plate Surrogate under Turbine-Relevant Conditions ○Jiale Wang ¹ , Guoqiang Xu ¹ , Jie Wen ¹ , Chenghua Zhu ¹ , Hao Li ¹ (¹ Beihang University)

Room P (204)

10:40 - 12:00 OS: Advanced Technologies for Mars Exploration (1)

1P01	Assessment of Thermochemical Nonequilibrium Models for Peak Heating Prediction in Hypersonic Double Cone Flows ○Tae Woong Jeong ¹ , Hojun You ² , Jae Gang Kim ² (¹ Korea Advanced Institute of Science and Technology , ² Sejong University)
1P02	Image-based aerodynamic force measurement in carbon dioxide environment ○IlSung Choi ¹ , Seong-Hyeon Park ² , Gisu Park ¹ (¹ Korea Advanced Institute of Science and Technology , ² Kyungpook National University)
1P03	A Zenoh-Based Communication Architecture for Autonomous Mission Software in Mars Exploration Robots ○Yeogyeon Kim ¹ , Jaeho Lee ² , Sungtae Moon ¹ (¹ Chungbuk National University , ² Unmanned Exploration Laboratory)
1P04	Yaw Control of a Variable-Pitch Mars Quadcopter: A Comparison between Non-Tilted and 5° Fixed-Tilt Rotor Configurations ○Yachao Dong ¹ , Qiquan Quan ¹ , Jinle Ren ¹ , Dewei Tang ¹ , Zongquan Deng ¹ (¹ Harbin Institute of Technology)

13:00 - 14:20 OS: Advanced Technologies for Mars Exploration (2)

1P05	Study on the Characteristics of Rotor Tip Vortex Structures and the Effects of Blade Tip Shapes on Aerodynamic Performance for Mars Aircraft ○Kaiyi Wang ¹ , Qiquan Quan ^{1,2} , Huihong Ma ¹ , Bo Tang ¹ , Dewei Tang ¹ , Zongquan Deng ¹ (¹ Harbin Institute of Technology , ² Zhengzhou Research Institute)
1P06	Confidence-Based Hybrid PINN-DNN Framework for On-Board Impulsive Trajectory Design ○Boyouon Sohn ¹ , Yujin Jeong ¹ , Donghun Lee ¹ (¹ Korea Advanced Institute of Science and Technology)
1P07	Ion Beam Diagnostics of Electrospray Thrusters via a Retarding Potential Analyzer and a Time-of-Flight Mass Spectrometer ○Moonheng Lee ¹ , Minjae Sim ¹ , Dongho Lee ¹ (¹ Department of Aerospace Engineering, KAIST)
1P08	Analysis of the Catalytic Recombination of Carbon Dioxide in the Martian Atmosphere Kim Chaeun ¹ , ○Kim Seonghwan ² , You Hojun ¹ , Kim Jae Gang ¹ (¹ Sejong University , ² Seoul National University)

14:30 - 15:50 OS: Advanced Technologies for Mars Exploration (3)

1P09	Mars Entry Terminal Point Control Guidance by Using Kalman Filter-Based Prediction Bias Estimation & Reversal Logic byeonghyeon Cho ¹ , ○Geongsu Park ¹ , Natnael S. Zewge ¹ , Hyochoong Bang ¹ (¹ Korea Advanced Institute of Science and Technology , ² Department of Aerospace Engineering)
1P10	Glideslope Scheduling and Command Regularization for Mars Powered Descent Guidance: 6 Degree-of-Freedom Evaluation ○Geongsu Park ¹ , Byeonghyeon Cho ¹ , Natnael S. Zewge ¹ , Hyochoong Bang ¹ (¹ Korea Advanced Institute of Science and Technology)
1P11	Physics-Residual Hybrid Modeling for Quadrotor Simulation with a Production Autopilot: Closed-Loop Fitting and Diagnostics ○MinKyu KIM ¹ , Jayden Dongwoo LEE ² , SungTae MOON ¹ (¹ Chung Buk National University , ² Korea Advanced Institute of Science and Technology)
1P12	Development of a Sub-kilowatt Hall Thruster for Mars Exploration ○Sim Minjae ¹ , Lee Moonheng ¹ , Yu Gunwon ¹ , Lee Dongho ¹ (¹ Korea Advanced Institute of Science and Technology)

16:00 - 17:00 OS: Aerodynamic Design and Optimization for UAV and eVTOL

Chair: Masahiro Kanazaki (Tokyo Metropolitan University)

1P13	Design Optimization of a Vein-Like Structure of Deployable Membrane Wing for Mar's Airplane ○Anonphong Risanthia ¹ , Masahiro Kanazaki ¹ (¹ Tokyo Metropolitan University)
1P14	A Study on the Flight Performance of Lift & Cruise Electric Aircraft Using the Panel Method ○Takei Yudai ¹ , Zhong Lei ¹ (¹ Suwa University of Science)
1P15 (Online)	Power-Energy Redundancy in Electric Vertical Takeoff and Landing Robust Sizing: Addressing Mission-Terminal Rotor Failures ○Jiahao Li ¹ , Xiaolu Wang ¹ , Yongzheng Zhao ¹ , Lili Yang ¹ (¹ Zhengzhou University of Aeronautics)

Room Q (206)**10:40 - 12:00 OS: Current Status and Future Prospects of Drone Research in Japan (1)**

Chair: Satoshi Suzuki (Chiba University)

1Q01	Rotor Configuration of Electric Tilt-Rotor UAVs Using Particle Swarm Optimization ○Eiko Wakasugi ¹ , Kentaro Yamazaki ¹ , Mai Bando ¹ , Shinji Hokamoto ¹ (¹ Kyushu University)
1Q02	Reinforcement Learning Based Flight Controller for Fixed-Wing UAV Using Soft Actor-Critic and Curriculum Learning ○Yutaro Tajima ¹ , Akinori Harada ² , Shin-Ichiro Higashino ² (¹ Graduate school of Engineering, Kyushu University , ² Department of Aeronautics and Astronautics, Kyushu University)
1Q03	Optimal Trim Conditions for a Dual-Propulsion VTOL UAV in Vertical Flight Under Horizontal Winds Based on Wrench Authority Analysis ○Takumi Ishii ¹ , Takateru Urakubo ¹ , Chihiro Kikumoto ² , Kohtaro Sabe ² (¹ Department of System Informatics, Kobe University , ² Aerosense Inc.)
1Q04	Development of a Fixed-Wing UAV for Wide-Area Aeromagnetic Survey and Its Survey Flights in Afar Depression, Ethiopia ○Shin-Ichiro Higashino ¹ , Naoto Ishikawa ² , Tesfaye Kidane ³ , Ryokei Yoshimura ⁴ , Ameha MULUNEH ⁶ , Balemwal ATNUF ⁶ , Mamoru Kadoya ⁵ , Masataka Tsutsumi ⁷ , Ryosuke Ito ⁸ (¹ Department of Aeronautics and Astronautics, Kyushu University , ² Department of Earth System Science, University of Toyama , ³ Dept. of Environmental Science and Geology, Wayne State Univ. , ⁴ Disaster Prevention Research Institute, Kyoto University , ⁵ X-Treme Composite Japan , ⁶ Department of Geology and Geophysics, Addis Ababa University , ⁷ Graduate student, Graduate School of Engineering, Kyushu Univ. , ⁸ Graduate student, Graduate School of Science, Kyoto Univ.)

13:00 - 14:20 OS: Current Status and Future Prospects of Drone Research in Japan (2)

1Q05	Cooperative search of multiple UAVs in non-GPS environments ○Subaru Inoue ¹ , Masafumi Miwa ² (¹ Tokushima University Graduate School , ² Tokushima University Graduate School of Technology)
1Q06	Drone Navigation in Harsh Environments Using FMCW Millimeter-Wave Radar ○Taiki Soeda ¹ , Satoshi Suzuki ¹ (¹ Chiba University)
1Q07	Development of a Sensor less and Energy-Efficient Bio-inspired Continuum Gripper for UAV Aerial Manipulation ○Haru Eguchi ¹ , Satoshi Suzuki ¹ (¹ Chiba University, Chiba, Japan)
1Q08	Unsteady aerodynamic analysis of a small drone in confined spaces ○Haruto Kamada ¹ , SUZUKI Satoshi ¹ , AOKI Takayuki ² , WATANABE Seiya ³ (¹ Chiba University , ² Institute of Science Tokyo , ³ Kyushu University)

14:30 - 15:50 OS: GNC Technologies for ReUSV (1)

Chair: Dongwon Jung (Korea Aerospace University)

1Q09	Quality-Adaptive Stereo Pixel-Level Tightly Coupled Relative Navigation Using LED Markers for Spacecraft Proximity Operations ○Woohyeon Jeong ¹ , Juha Park ¹ , Sangkyung Sung ¹ (¹ Konkuk university)
1Q10	SAC-Based Integrated Control of a Reaction-Wheel-Equipped Dual-Arm Free-Floating Space Robot ○Kyeongsun LIM ¹ , Byungjun KIM ¹ , Seunghyeon BYEON ¹ , Chungwon KIM ¹ , Donghun LEE ¹ (¹ Korea Advanced Institute of Science and Technology)
1Q11	Development of an Omnidirectional-Wheel-Based Hardware Simulator for Autonomous Rendezvous and Docking Applications ○Seunghyeon BYEON ¹ , Kyeongsun LIM ¹ , Donghun LEE ¹ (¹ Korea Advanced Institute of Science and Technology)
1Q12	Greedy D-optimal Selection of LiDAR Measurements via Range-Direction Jacobians for ISS Proximity Operations ○Yeontak Song ¹ , Hyunseok Choi ¹ , Sangkyung Sung ¹ (¹ Konkuk University)

16:00 - 17:00 OS: GNC Technologies for ReUSV (2)

Chair: Dongwon Jung (Korea Aerospace University)

1Q13	Reachability-Guided Reference Governor for Spacecraft Attitude Control under Actuator Degradation ○Hyunju Lee ¹ , Heokjune You ¹ , Sara Woo ¹ , Dongwon Jung ¹ (¹ Korea Aerospace University)
1Q14	Long-Range Rendezvous Guidance Using Sequential Convex Programming with Initial State Uncertainty Propagation ○Shunsuke Iwai ¹ , Takehiro Higuchi ¹ (¹ Yokohama National University)
1Q15	End-to-End Simulation Framework for Orbital Contact Dynamics for On-Orbit Servicing ○Heokjune You ¹ , Sara Woo ¹ , Hyunju Lee ¹ , Dongwon Jung ¹ (¹ Korea Aerospace Univerisy)

Room R (207)**10:20 - 12:00 OS: Heterogeneous Satellite Constellation Technology (1)**

1R01	Effect of Mounting Boundary Conditions on the Vibration Response of Spaceborne Electronic Equipment ○KyeongJae Lee ¹ , HyunUng Oh ¹ (¹ Korea Aerospace University)
1R02	Physical-Layer Security Design Using Channel Distribution for Integrated Satellite-Terrestrial Networks ○Hyeongjun Park ¹ , Minje Kim ² , Hyuckjin Choi ³ , Jinho Yang ¹ , Junil Choi ¹ (¹ Korea Advanced Institute of Science and Technology , ² Electronics and Telecommunications Research Institute , ³ LG Electronics Inc.)
1R03	Tip-and-Cue Based Cooperative Object Detection for Very High Resolution Imagery ○Jaemin Kang ¹ , Gihwan Kim ¹ , Hanbin Lee ¹ , Daeun Seo ¹ , Hyungshin Kim ¹ (¹ Chungnam National University)
1R04	Trade Study of Deployment-Aware Satellite Constellation Pattern Design under Heterogeneous Launcher Options ○Beomjin Gwon ¹ , Jaemyung Ahn ¹ (¹ Korea Advanced Institute of Science and Technology)

1R05	An FPGA-Based CCSDS Laser Communication Transceiver: Design and Experimental Results ○Oh Dong-Ha ¹ , Noh Jung-Hoon ¹ (¹ Chungbuk National University)
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13:00 - 14:40 **OS: Heterogeneous Satellite Constellation Technology (2)**

1R06	Energy-Efficient Resource Optimization for Traffic-Driven Low Earth Orbit Satellite Communications ○Wooseok Cha ¹ , Kyeongsoo Kim ² , Seonghoon Kim ² , Jihwan P. Choi ² , Junil Choi ¹ (¹ School of Electrical Engineering, KAIST , ² Department of Aerospace Engineering, KAIST)
1R07	Development of an LLM-Driven Abaqus FEA Automation Framework with Harness Engineering for Hallucination Mitigation and Self-Correction ○Eunhyun Kim ¹ , Eunhyun Kim ¹ , Jae Hyuk Lim ¹ (¹ School of Mechanical Engineering, Kyung Hee University)
1R08	Comparative Analysis of Model Predictive Control Performance Based on Satellite Relative Orbit Dynamics ○Geunhong Park ¹ , Jeongchan Kim ¹ , Henzeh Leeghim ¹ (¹ Department of Aerospace Engineering, Chosun University)
1R09	Domain-Invariant Representation Learning for Robust Ship Type Classification in Multi-Satellite High-Resolution SAR Imagery ○Hwisong Kim ¹ , Juyoung Song ² , Changmin Lee ¹ , Duk-jin Kim ¹ (¹ Seoul National University , ² Korean Advanced Institute of Science and Technology)
1R10	Exploring Vision-Language Models for Fine-Grained Object Classification in Remote Sensing Imagery Oh Youngtaek ¹ , ○Son Sohee ¹ (¹ SI Analytics)

14:50 - 16:10 **Structures and Materials: Structural Testing**
Chair: Joong-Kwan Kim (Hanseu University)

1R11	Feasibility Study on a Roll-up Stowable Deployable Wing ○Hiroaki Tanaka ¹ , Hiroki Himeda ¹ , Kosei Mimura ¹ , Makoto Mizoguchi ¹ (¹ National Defense Academy of Japan)
1R12	THz Wave-Based Thin Film Thickness Measurement Using an Effective Refractive Index Model ○Hyeonseong Ryu ^{1,2} , Jae-Ho Dong ^{1,2} , Lae-Hyong Kang ^{1,2} (¹ Jeonbuk National University , ² LANL-JBNU Engineering Institute-Korea)
1R13	Development of a High-Temperature Environment Simulation System for Electromagnetic Performance Evaluation of Radar Absorbing Materials ○Taewoong KANG ¹ , Kyunghoon BAE ¹ , Sangmin BAEK ² , Jongkwang LEE ¹ (¹ Hanbat National University , ² Agency for Defense Development)
1R14	Artificial Defect Evaluation of Cylindrical Steel Towers Using a Laser Ultrasonic Test ○Jae-Hun Jung ^{1,2} , Lae-Hyong Kang ^{1,2} (¹ Jeonbuk National University , ² LANL-JBNU Engineering Institute-Korea)

Oct 28 (Wed)

Room A (Conference Hall)

09:00 - 09:40 **Plenary Lecture 1**

09:40 - 10:20 **Plenary Lecture 2**

10:40 - 11:20 **Plenary Lecture 3**

11:20 - 12:00 **Plenary Lecture 4**

Room C (Main Hall)

13:00 - 14:20 **Aerodynamics and Design: Unsteady Aerodynamics(3)**

Chair: Jong-Seob Han (Chungnam National University)

2C01	Passive Control of Ship Stern Airwake for Helicopter Safe Landing in High Sea States ○Luyao Qi ¹ , Yongjie Shi ¹ , Guohua Xu ¹ (¹ Nanjing University of Aeronautics and Astronautics)
2C02 (Online)	A Stability-Boundary Prediction Method for Axial Compressors Based on a Distributed Body-Force Model ○Ling Jianlan ¹ , Pan Tianyu ¹ (¹ Beihang University, Beijing,China)
2C03	Aerodynamic Performance and wake interaction of a full-configuration helicopter during shipboard approach using Detached Eddy Simulation ○Seonghwan Park ¹ , Chan-Ho Song ¹ , Seung Been Shin ¹ , Rho Shin Myong ^{1,2} , Hakjin Lee ^{1,2} (¹ Gyeongsang National University , ² Global Research Center for Aircraft Core Technology)
2C04 (Online)	Transient Investigation on Blade Passages of Centrifugal Impeller with Fluctuating Rotational Speed ○Mu Ze ¹ , Pan Tianyu ¹ , Li Qiushi ¹ (¹ Beihang University, Beijing, China)

14:30 - 15:30 **Aerodynamics and Design: Unsteady Aerodynamics(4)**

2C05 (Online)	Plasma-Actuated Dynamic Stall Control: Swaying, Intermixing, and Stabilized Vortex Patterns on a Pitching Airfoil ○Fahad Nawaz ¹ , Kashif Ali ¹ , Xuanshi Meng ^{1,2} (¹ Northwestern Polytechnical University , ² National Key Laboratory of Aircraft Configuration Design)
2C06	DES-Based Numerical Investigation of a Folding Propeller during the Stop-Fold Transition with One-DOF Rotation ○Dong Su Hong ¹ , Seung Been Shin ¹ , Park Kyu Tae ¹ , Sang Min Son ¹ , Rho Shin Myong ¹ , Hakjin Lee ¹ (¹ Gyeongsang National University)
2C07 (Online)	Dynamic Laminar Separation Bubble Control on a Low-Reynolds-Number Airfoil Using Kriging-Assisted Genetic Algorithm Optimization of Plasma Actuation ○KASHIF ALI ¹ , FAHAD NAWAZ ¹ , XUANSHI MENG ¹ (¹ Northwestern Polytechnical University, Xi)

Room D (Main Hall)

13:00 - 14:20 **Dynamics/Control/Avionics: Guidance and Control (5)**

2D01	Adaptive Noise Reduction for UAM eVTOL Aircraft based on Actuator Phase Angle Control ○NGUYEN XUAN MUNG ¹ , SUNG KYUNG HONG ¹ (¹ SEJONG UNIVERSITY)
2D02	Payload-Stabilized Manipulation of a Dual-Arm Space Robot ○Jaewook Lim ¹ , Dong-Hyun Cho ¹ (¹ Pusan National University)
2D03	Robust VIO Algorithm with Rotor Thrust and Torque Fusion for Rotorcraft UAVs ○Byungjae Kang ¹ , Kim Eunjung ¹ , Jeon Suhwan ¹ , Suk Jinyoung ¹ , Kim Seungkeun ¹ (¹ Chungnam National University)
2D04	Depth-Conditioned Barrier-Aware Flow Matching for Multirotor UAV Motion Planning ○Kwangwoo Jang ¹ , Yangjae Jeong ¹ , Gague Kim ¹ (¹ Electronics and Telecommunications Research Institute)

14:30 - 15:50 **Dynamics/Control/Avionics: Guidance and Control (6)**

2D05	Natural Motion Circumnavigation Based Inspection Window Analysis for a Chaser Under Distance and Reflectance Constraints ○Hanik KIM ^{1,2} , Youngkyun SHIN ³ , Yoon-il LEE ³ , Bohyun CHAN ³ , Donghun LEE ³ , Hyochoong BANG ³ , Hong-Young PARK ^{1,2} , Joung-Ki SEO ^{1,2} (¹ Satellite Technology Research Center, KAIST , ² Space Institute, KAIST , ³ Department of Aerospace Engineering, KAIST)
2D06	System Identification of FWUAV Considering Periodic Effects ○Chaeryeong Kim ¹ , Wonseok Lee ¹ , Seonghwan Jin ¹ , Seongjin Kim ¹ , Seungkeun Kim ¹ , Jinyoung Suk ¹ (¹ Chungnam National University)
2D07	Real-Time Local Collision Avoidance for UAVs Using Adaptive-sampling MPPI ○Hyorim Kim ¹ , Suhwan Jeon ¹ , Seonwoo Kim ¹ , Donghoon Seo ¹ , Seungkeun Kim ¹ , Jinyoung Suk ¹ (¹ Chungnam National University)
2D08	Compliant Quadrotor Flight through Flex-Sensor Admittance Control ○Siwoon Song ¹ , Jinhyeong Jeon ¹ , Inseong Hwang ² , Sungtae Moon ¹ (¹ Chungbuk National University , ² Korea Aerospace Research Institute)

Room G (Small Hall)**13:00 - 14:20 Aerodynamics and Design: Computational Fluid Dynamics (4)**

2G01	Assessment of Delayed Detached-Eddy Simulations for Shock-Induced Separated Flows Over Airfoils ○Satoshi Kuruwara ¹ , Hiroshi Terashima ¹ (¹ Hokkaido University)
2G02	Numerical Simulation of Cavitation Characteristics in Airfoil Flow Based on Barotropic Cavitation Model Xianwei LIU ¹ , OWentao LIANG ¹ , Ye CHEN ¹ , Jiangfeng FU ¹ (¹ Northwestern Polytechnical University)
2G03	Numerical Analysis of eVTOL Downwash and Outwash Flow Fields in Ground Effect ○Lee Donghoon ¹ , Han Cheolheui ¹ (¹ Korean National University of Transportation)
2G04	Thermochemical Model Effects on Aerodynamic Heating Characteristics in High-Speed Flows ○Lee Dongju ¹ , Noh Gayeon ¹ , Joo Jayeon ² , Kim Jae Gang ¹ , You Hojun ¹ (¹ Department of Aerospace System Engineering, Sejong University , ² Department of Aerospace Engineering, Seoul National University)

14:30 - 15:50 Aerodynamics and Design: Computational Fluid Dynamics (5)

2G05	6-DOF Aerothermodynamic Survivability Analysis of Arbitrary-Shaped Reentry Objects across Multiple Flow Regimes ○Jaesung Lee ¹ , Kyu Hong Kim ^{1,2} , Seong Hyun Park ³ , Jae Gang Kim ⁴ (¹ Seoul National University , ² Institute of Advanced Aerospace Technology , ³ Kyungpook National University , ⁴ Sejong University)
2G06	Assessment of VLM-Based Dynamic Stability Prediction for AAM Virtual Flight Certification Using CFD Forced Oscillation ○Nadhie Juliawan ¹ , Seokju Lee ² , Sangho Lee ² , Jae-Woo Lee ² , Sangho Kim ² (¹ Konkuk Aerospace Design Airworthiness Institute (KADA) , ² Department of Aerospace and Mobility Engineering, Konkuk Univ.)
2G07	Experimental and Computational Study using Shock Shapes over a Sphere in Lower Hypersonic Flow Regime ○Kim Young Jo ¹ , Furudate Michiko ¹ , Kim Jinhwi ² , Lee Bok Jik ² , Ohtani Kiyonobu ³ , Nagai Hiroki ³ (¹ Chungnam National University , ² Seoul National University , ³ Tohoku University)
2G08	On the Modelling of Boundary Layer Parameters and Amplification Factor Growth for High-Speed Flow Using Local Variables in CFD Simulation ○Daehyuk Kim ¹ , Donghun Park ¹ (¹ Pusan National University)

Room N (201)**13:00 - 14:00 System Engineering: Autonomous and Fault-Tolerant Systems**

2N01	Data-Driven based Fault Detection and Isolation for Lift-cruise eVTOL ○JongHyun Lee ¹ , Byeong-Un Jo ¹ (¹ Sejong University)
2N02 (Online)	A Recursive Fault Factor Method for Health Monitoring of Liquid Rocket Engines ○Jihyoung Cha ¹ , Sangho Ko ² , Juhyun Shin ¹ , Jinhyuk Kim ¹ , Chang-Ho Nam ¹ (¹ Korea Aerospace Research Institute , ² Korea Aerospace University)
2N03	Identification of a Missing Body Moment in a Quadrotor Digital Twin Using Rotor-Speed Telemetry ○Lee Jayden Dongwoo ¹ , Kim Minkyu ² , Bang Hyochoong ¹ , Moon Sungtae ² (¹ Korea Advanced Institute of Science and Technology , ² ChungBuk National University)

14:10 - 15:50 Structures and Materials: Structural Analysis(1)

Chair: Jae Hyuk Lim (Kyung Hee University)

2N04	Ultrasonic Measurement-Based Prediction Model for Axial Force Reduction in Structural Bolted Joints ○JaeHo Dong ^{1,2} , DongUK Kim ³ , Lae-Hyong Kang ^{1,2} (¹ Jeonbuk National University , ² LANL-JBNU Engineering Institute-Korea , ³ LG Electronics Inc)
2N05	Effect of Environmental Temperature on Mechanical Behavior of CFRP/ Aluminum Hybrid Joint ○Okada Takao ¹ , Kasahara Toshiyuki ¹ , Takeda Tomo ¹ , Kumazawa Hisashi ¹ , Aoki Yuichiro ¹ (¹ Japan Aerospace Exploration Agency)
2N06	Low-Cycle Fatigue Life Prediction Considering Material Anisotropy of Nickel-Based Superalloys for High-Temperature Gas Turbine Applications ○Mir Kang ¹ , Myungjun Kim ¹ (¹ Korea National University of Transportation)
2N07	GPU-Accelerated Sparse Direct Solver with Mixed-Precision FGMRES Refinement for Large-Scale Finite Element Analysis ○Seung Won Cho ^{1,2} , Jeong Ho Kim ^{1,2} (¹ Inha University , ² Department of Aerospace Engineering)
2N08	Exploratory Study on the Design of a 180-Passenger Hydrogen Aircraft for Asian Countries ○Myung-Kwan Ahn ¹ (¹ Korea Aircraft Development Center)

Room O (202)**13:00 - 14:20 Structures and Materials: Aeroelasticity and Control**

2O01	A Rigid-Flexible Coupled Simulation Framework for Impact Absorption of Multi-UAV Suspended Net Systems ○Zhenhao Gao ¹ , Chenglong Xu ¹ , Jihe Wang ¹ (¹ School of Aeronautics and Astronautics, Sun Yat-sen University)
2O02	Modal-Equivalent Lattice Scaling of Additively Manufactured Wing Models for Aeroelastic Wind-Tunnel Testing ○Natsuki Tsushima ^{1,2} , Ryo Higuchi ² , Tomohiro Yokozeki ² (¹ Kyushu University , ² The University of Tokyo)
2O03	Mechanism-Oriented Wind Tunnel Validation of Nonlinear Aeroelastic Stability in a 3D-Printed Modal-Equivalent Flexible Wing ○Kohei Narishige ¹ , Natsuki Tsushima ^{1,2} , Shinichiro Higashino ¹ , Fujio Tsumori ¹ (¹ Kyushu University , ² The University of Tokyo)
2O04	Nonlinear Aeroelastic Analysis of Bio-Inspired Feather Arrays with Parameterized Feather Planforms ○Soichiro Takeshtia ¹ , Hayato Mori ¹ , Natsuki Tsushima ^{1,2} , Fujio Tsumori ¹ (¹ Kyushu University , ² The University of Tokyo)

Room P (204)

13:00 - 14:20 OS: Air Traffic Management (1)

2P01	Accuracy analysis on climb rate prediction using machine learning-derived rate of climb ○HANGYEOL SEON ^{1,2} , MARK BROWN ¹ , HIROKO HIRABAYASHI ¹ , KEUMJIN LEE ² (¹ Electronic Navigation Research Institute , ² Korea Aerospace University)
2P02	City Pair ATM Performance Case Study: Singapore-Tokyo ○MARK BROWN ¹ , HIROKO HIRABAYASHI ¹ , XIAODONG LU ¹ (¹ Electronic Navigation Research Institute)
2P03	Air Traffic Complexity Evaluation Using 3D CTGA for Capturing Vertical Dynamic Interactions ○Ren Sato ¹ , Eri Itoh ¹ (¹ The University of Tokyo)
2P04	Dynamic Weather-Adaptive Air Traffic Flow Management Using a Digital Twin Framework ○Olivia Curtis ^{1,2} , Cees Bil ¹ , Andrew Eberhard ¹ , Adriana Andreeva-Mori ² (¹ Royal Melbourne Institute of Technology (RMIT) , ² Osaka Metropolitan University (OMU))

Room Q (206)

13:00 - 14:40 Aerodynamics and Design: Computational Fluid Dynamics (6)

Chair: Takahiro Tsukahara (Tokyo University of Science)

2Q01	A Comparative Assessment of Transition Models for the Aerodynamic Analysis and Design of a Blended Wing Body Configuration Using RANS ○Haebeom Lee ¹ , Wooseung Lee ¹ , Donghun Park ¹ (¹ Pusan National University)
2Q02	Effects of Shape and Rotational Degrees of Freedom on the Transonic Dynamic Instability of the HRV Capsule ○Yuki Takeda ¹ , Ayumu Kitahara ¹ (¹ Iwate University)
2Q03	Development of a Multi-Fidelity Aerodynamic Analysis Tool for a Multidisciplinary Design Analysis and Optimization System of UAM Aircraft ○Jung Seokhyun ¹ , Lee Wooseung ¹ , Kim Dahye ¹ , Tae Myungsik ² , Lee Hongkyun ³ , Chang Byunghee ⁴ , Park Donghun ¹ (¹ Pusan National University , ² Korea Agency for Infrastructure Technology Advancement , ³ Hanwha Aerospace , ⁴ Korea Aerospace Research Institute)
2Q04	Aerodynamic Analysis of the Ceiling Effect on a Quadcopter in Hovering and Tilted Conditions ○Gyungjoo Ban ¹ , Jeongwoo Ko ¹ (¹ Korea Aerospace University , ² Laboratory for Air Mobility & Aeroacoustics)
2Q05 (Online)	Numerical Study on Flow Structures during Supersonic Inlet Unstart and Restart Processes under Constant Acceleration ○silu Sun ¹ , jinglei Xu ¹ (¹ Nanjing University of Aeronautics and Astronautics)

Room R (207)

13:00 - 14:40 Dynamics/Control/Avionics: Guidance and Control (7)

Chair: Seiya Ueno (JAXA)

2R01	Optimal Drone Evasion Maneuvers and Timing Against Bird Attack ○Yusuke Hayashi ¹ , Yamasaki Takeshi ¹ , Takano Hiroyuki ¹ (¹ National Defense Academy of Japan)
2R02	Multi-Agent Reinforcement Learning for Maneuvering and Missile-Employment Decisions in Within-Visual-Range Air Combat ○Habtamu Mola ^{1,2} , Bang Hyochoong ^{1,2} (¹ Department of Aerospace Engineering , ² Korea Advanced Institute of Science and Technology (KAIST))
2R03	Flight Control System Design for a Mars Airplane to Address a Time Delay ○Taichi Hoshiba ¹ , Akio Abe ² (¹ Graduate School of Science and Technology, Nihon University , ² College of Science and Technology, Nihon University)
2R04	Control Moment Gyroscope Augmentation for Attitude Control of Mars Multi-rotors in a Low-Density Atmosphere ○DongHyeon Nam ¹ , Henzesh leeghim ¹ (¹ Chosun University)
2R05	Vehicle-Envelope-Constrained Motion Planning for AAM Obstacle Avoidance Considering Passenger Comfort ○Seung Youn Baek ¹ , LV Thang Nguyen ² , Hyeon Jun Lee ¹ , Jae-Woo Lee ¹ (¹ Konkuk University , ² Konkuk Aerospace Design-Airworthiness Institute)

Oct 29 (Thu)

Room A (Conference Hall)

09:00 - 10:20 Aerodynamics and Design: Computational Fluid Dynamics (7)

Chair: Koji Miyaji (Yokohama National University)

3A01	Implementing Free-Stream Turbulence Generation for Boundary-Layer Transition Research in a DNS Solver ○Xavier Chanteux ¹ , David Lusher ¹ , Naoko Tokugawa ¹ (¹ JAXA)
3A02	Aero-Structural Coupled Optimization Design of Grid Fins under Transonic Conditions ○Aiwei Zhan ¹ , Zhonghua Han ¹ , Shihao Liu ¹ , Tao Du ² (¹ School of Aeronautics, Northwestern Polytechnical University , ² Beijing Institute of Astronautical Systems Engineering)
3A03 (Online)	Research on Full-Operating-Range Low-Speed Simulation Design Method for Compressor Airfoils Xianjun Yu ¹ , OZeyu Wu ¹ , Ruoyu Wang ¹ , Guangfeng An ¹ , Baojie Liu ¹ (¹ Research Institute of Aero-Engine, Beihang University)
3A04	Comparison of Numerical Performance of Rotated-RoeM and AUSM2C for Hypersonic Equilibrium Flow Simulations ○Donguk Kim ¹ , Hyunbin Kang ¹ , Seungsoo Lee ¹ , Jin Seok Park ¹ (¹ Inha University)

10:30 - 11:30 Aerodynamics and Design: Computational Fluid Dynamics (8)

Chair: Xavier Chanteux (JAXA)

3A05	Aerodynamic Database Construction for eVTOL Aircraft Using Flight-State Frequency-Based Sampling ○Seokju Lee ^{2,3,4} , Juliawan Nadhie ^{1,2,4} , Sangho Lee ^{2,3,4} , Jae-Woo Lee ^{1,2,4} (¹ Konkuk Aerospace Design Airworthiness Institute (KADA) , ² Seoul, Republic of Korea , ³ Department of Aerospace and Mobility Engineering , ⁴ Konkuk University)
3A06	Generation of high-order elements for high-order flux reconstruction CFD ○Misawa Keitaro ¹ , Miyaji Koji ¹ (¹ Yokohama National University)
3A07	Topology Optimization for Low-Reynolds Number Flow Problems ○Mujtaba Rashid ¹ , Miyaji Koji ¹ , Kawamura Yasumi ¹ (¹ Yokohama National University)

Room C (Main Hall)

09:00 - 10:00 Aircraft,Helicopter,AAM and UAV Design (5)

3C01 (Online)	Aerodynamic Optimization of a Tandem-Wing Aircraft with Longitudinal Stability Constraints and Configuration Parametric Trade-Offs ○Changning Chen ¹ , Xiaolu Wang ¹ , Yongzheng Zhao ¹ , Jing Li ² (¹ Zhengzhou University of Aeronautics , ² Zhengzhou University)
3C02	Development of an In-Flight Propulsion Measurement System for Validation of Electric UAV Propulsion Performance Models ○Dohun KWAK ¹ , Tae Young KIM ¹ , Hak-Tae LEE ¹ (¹ Department of Aerospace, Inha University)
3C03	Development of a Temperature-Aware Solar Panel and Battery Analysis Module for Early-Stage HALE Aircraft Design Framework ○HNIN HTET PHUY ¹ , JEONGHWAN KIM ¹ , KWANJUNG YEE ¹ (¹ SEOUL NATIONAL UNIVERSITY)

10:10 - 11:10 Aircraft,Helicopter,AAM and UAV Design (6)

3C04	Improved Physics-Based LH₂ Tank Design Methodology for Early-Stage Design of Liquid Hydrogen Aircraft ○Wonbin Park ¹ , Jaehyun Cho ¹ , Junhwi Park ¹ , Yee Kwanjung ¹ (¹ Seoul national university)
3C05	Integrated Power Conversion Modeling for Early-Stage Design of Hybrid Electric eVTOL Aircraft ○Jaehyun Cho ¹ , Kwanjung Yee ¹ (¹ Seoul National University)
3C06	A Unified Modeling History Timeline Strategy for Parametric Modeling of Multi-Configuration Fuselages ○Yuting Yuan ¹ , Wei Song ¹ , Xianwu Qi ¹ , Yaofeng Jie ¹ (¹ Nanchang Hangkong University)

Room D (Main Hall)

09:00 - 10:20 Aerodynamics and Design: Wind Tunnel Testing(4)

Chair: Hidemasa Yasuda (KHI)

3D01	Effect of Boundary Layer Ingestion Location on Propulsive Efficiency and Wake Characteristics of a Distributed Electric Propulsion Wing ○Seongwoo Park ¹ , Donggeun Kim ¹ , Jong-Seob Han ¹ (¹ Chungnam National University)
3D02	Development of a Six-Axis External Balance based on Single-axis Load Cell ○Donggeun Kim ¹ , Seongwoo Park ¹ , Jong-Seob Han ¹ (¹ Chungnam National University)
3D03	Investigation of the characteristics of the lift rotor to achieve more stable VTOL transition flight ○Murakumo Yutaka ¹ , Furuya Takashi ¹ (¹ NTT e-Drone Technology)
3D04	Quantification of Turbulence Resilience of NACA0012 airfoil at a Low Reynolds Number ○Shun Riko ¹ , Makoto Mizoguchi ¹ , Hajime Itoh ¹ (¹ National Defense Academy)

Room G (Small Hall)

09:00 - 10:20 Combustion and Propulsion: Spacecraft Propulsion(3)

Chair: Holak Kim (Pusan National University)

3G01 (Online)	Research on Thrust Vector Characteristics Based on Displacement Control of Nozzle Exit Tabs ○Jia-yi Liang ¹ , He-meng Shi ¹ , Yi-hua Xu ¹ (¹ School of Power and Energy, Nanchang Hangkong University , ² Nanchang Hangkong University)
3G02	Experimental Investigation of Hollow Anode Geometry Effects on Thrust Performance of Miniature Low-Power Anode Layer Hall Thrusters ○Takumi Tsuji ¹ , Yansheng Yang ¹ , Runa Miyake ¹ , Kenta Yanagihara ¹ , Tomoyuki Ikeda ¹ , Hideyuki Horisawa ¹ (¹ Tokai University)
3G03	Prototype Development of a 1 kW-class AF-MPD Thruster ○Jeongho Kim ¹ , Jaeyeon Hwang ¹ , Haewon Shin ² , Kil-Byoung Chai ² , Holak Kim ¹ (¹ Pusan National University , ² Korea Atomic Energy Research Institute)
3G04	Performance Analysis of a Low-Power RF Ion Thruster Using EEDF-Based Zero-Dimensional Modeling ○Jung Jiwoong ¹ , Chai Kil-Byoung ² , Kim Holak ¹ (¹ Pusan National University , ² Korea Atomic Energy Research Institute)

10:30 - 11:30 Combustion and Propulsion: Spacecraft Propulsion(4)

3G05	Experimental Performance Characteristics of a Rail-Type Pulsed Plasma Thruster Depending on Geometric Parameters ○Seokhwan Baek ¹ , Miji Kim ¹ , Holak Kim ¹ (¹ Pusan National University)
3G06	Development of Laboratory Model of a Gas-Fed Pulsed Plasma Thruster (GFPT) for VLEO Satellites ○Miji Kim ¹ , Seokhwan Baek ¹ , Holak Kim ¹ (¹ Pusan National University)
3G07	Conceptual Design and Preliminary Assessment of a Triple Langmuir Probe for Pulsed Plasma Thruster Plume Diagnostics ○Seojin Kim ¹ , Seokhwan Baek ¹ , Jaeyeon Hwang ¹ , Junyoung Kim ² , Holak Kim ¹ (¹ Pusan National University , ² Korea University Sejong Campus)

Room N (201)

09:00 - 10:40 Structures and Materials: Structural Analysis(2)&Smart Structures

3N01	Experimental Validation of a Critical-Strain-Based Structural Design Methodology for QFN Packages ○Ji-Eun Cha ¹ , Tae-Yong Park ² , Hyun-Ung Oh ^{1,2} (¹ Korea Aerospace University, Korea , ² STEPLab. Ltd., Gwanggyo, Korea)
3N02	Bayesian Digital Twin and Spatio-Temporal Weighting for Wing-Body Connection Fault Detection under Variable Profiles ○Songchen Zhao ¹ , Haihong Xue ¹ , Shuanhang Yan ¹ (¹ The First Aircraft Design and Research Institute of AVIC)
3N03	Probabilistic Crashworthiness Assessment of a Quad-Tilting Rotor UAM under Emergency Landing Conditions Using INDI-Based Flight Control and Finite Element Method ○Jaryong Cho ¹ , Eunwoo Kim ¹ , Geun-Hak Bae ¹ , Ui Hyeon Shin ¹ , Jin Yeon Cho ¹ (¹ Department of Aerospace Engineering, Inha University)
3N04	Novel Deployable Structure Consisting of a Convex Boom and a Bellows Structure ○Kosei MIMURA ¹ , Hiroaki TANAKA ¹ (¹ National Defense Academy of Japan)
3N05	Wettability Control on Durable Hierarchical Ceramic Surfaces Fabricated via a Multi-step Imprint Process ○Daigo Kamioka ¹ , Natsuki Tsushima ^{1,2} , Fujio Tsumori ¹ (¹ Kyushu University , ² The University of Tokyo)

Room O (202)

09:00 - 10:00 System Engineering: Multidisciplinary Engineering, AI...(2)

3O01	Automated SysML v2 Formalization of Unmanned Vehicle Requirements via LLM-based Semantic Validation and Self-Correction: Application to the Indoor Fire Site Search Unmanned Vehicles Development Project ○HYOJEONG SEOK ¹ , INSEONG HWANG ¹ , WANGGU KANG ¹ (¹ Korea Aerospace Research Institute)
3O02	Thermo-Structural Analysis of Reusable Vehicle under Atmospheric Reentry Flow Conditions ○Eubin Kim ¹ , Jaryong Cho ¹ , Hyunbin Kang ¹ , Jin Seok Park ¹ , Jin Yeon Cho ¹ (¹ Inha University)
3O03	Knowledge-Injected Reinforcement Learning for VRS-Safe UAM Landing: Human Marking, Curriculum Training, and PINN Dynamics ○Jaerim Kim ¹ , Sungwook Cho ¹ (¹ Cheongju University)

10:10 - 11:10 Multidisciplinary Engineering, AI...(2)

3O04	Three-Dimensional Topology Optimization of Aircraft Wing Internal Structures Considering Aerodynamic-Structural Interaction ○Kei Ishiyama ¹ , Keita Kambayashi ² , Takahiko Kurahashi ² (¹ Graduate School of Nagaoka University of Technology , ² Nagaoka University of Technology)
3O05	Swarm Task Allocation for UAVs using Adaptive ACO Algorithm combined with Reinforcement Learning ○Junjae Kim ¹ , Yechan Yang ¹ , Backsub Shin ¹ , Jinyoung Suk ¹ , Seungkeun Kim ¹ (¹ Chungnam National University)
3O06	A Prototype Scientific Scene Generation Module for Lunar Spectroscopy: Toward End-to-End Performance Simulation of Moon-Mapping Instruments ○Manfred Gawlas ¹ , Jakub Leś ^{2,3} (¹ Wroclaw University of Technology , ² University of Wroclaw , ³ Creotech Instruments S.A.)

Room P (204)

09:00 - 10:00 OS: Traffic Management for Emerging Aircraft

Chair: Daichi Toratani (ENRI)

3P01	Enhancing Demand-Capacity Balancing for Urban Air Mobility Under a Decentralized System ○Gaku Sato ^{1,2} , Daichi Toratani ¹ , Higuchi Takehiro ² (¹ Electronic Navigation Research Institute , ² Yokohama National University)
3P02	An Integrated Framework Linking eVTOL Mission Parameters and Population Accessibility in Advanced Air Mobility ○Haruka NAKAYAMA ¹ , Adriana ANDREEVA-MORI ¹ , Yukinori INOUE ¹ , Daisuke SASAKI ¹ (¹ Graduate School of Engineering, Osaka Metropolitan University)
3P03	VertiportVLM: A Vision-Language Model Approach for Vertiport Status Recognition to Support UAM Air Traffic Control Operations ○Jeongmin Kim ¹ , Kyowon Song ¹ (¹ Kookmin University)

10:10 - 11:30 OS: UTM System Development in Korea

Chair: Sang Hyun KIM (Korea Aerospace University)

3P04	Recent Progress in Korea UTM Research and Development (2023–2026) ○Lee Jihyun ¹ , Kim Youngju ¹ , Kim Suro ¹ , Lee Juhyeok ¹ , Jeon Chungryong ¹ , Kim Songju ¹ (¹ Korea Institute of Aviation Safety Technology)
3P05	Geofence-Aware Source Seeking with Formation Stability ○Jung Min KANG ¹ , Sang Hyun KIM ¹ (¹ Korea Aerospace University)
3P06	A Study on the Interconnection and Altitude Separation for Integrated UTM and UAM Traffic Management ○HEO HONGMOO ¹ , PARK MYUNG KYU ¹ , KIM DONG KYU ¹ , MOON KWANG OH ¹ , KANG SEUNG MO ¹ (¹ Korean Air Lines Co., Ltd)
3P07	Third-Party Casualty Estimation for Urban Air Mobility Crashes in Seoul Based on Finite Element Building Damage Analysis ○Younsil Kim ¹ , Duc-Kien THAI ² , Oğuz Kağan GENÇ ² , Joongwon Bae ¹ (¹ Korea Aerospace Research Institute , ² Sejong University)

Room Q (206)

09:00 - 10:00 Dynamics/Control/Avionics: Sensors and Actuators

3Q01	Preliminary Evaluation of an RPAS-Based Airborne Communication Payload for Disaster Response ○Kiyoshi Kimura ¹ , Soekjun Park ² , ○Yusaku Yamashita ¹ , Adriana Andreeva-Mori ³ (¹ Aerodyne Corp. , ² SoftBank Corp. , ³ Osaka Metropolitan University)
3Q02	Analysis of Rotor Blade Shape Variation Effects on Dynamic RCS and Micro-Doppler Characteristics ○Kunwoo Kim ¹ , Sumin Choi ¹ , Hakjin Lee ¹ , Rhoshin Myong ¹ (¹ Gyeongsang National University)
3Q03	Heterogeneous Multi-Shutter and Event Camera Navigation via IESKF for Spacecraft Proximity Operations ○Heeju Choi ¹ , DongHyeon Nam ¹ , Henzeh Leeghim ¹ (¹ chosun university)

Room R (207)

09:00 - 10:00 Dynamics/Control/Avionics: Guidance and Control (8)

3R01	Safety-Constrained Fault Tolerant Control for Multicopter Thrust Failure Using Control Barrier Function ○Minjun Jang ¹ , Doyun Kim ¹ , Yeji Kim ¹ , Seungkeun Kim ¹ , Jinyoung Suk ¹ (¹ Chungnam National University)
3R02	Constraint-Embedded Cruise Trajectory Generation for Missile Mission Planning ○Gyeonghun Lim ¹ , SeungKee Yu ² , JunYong Shim ² , JungWook Seo ² , InHan Kim ² , Chanuk Kyeong ² , Sungtae Moon ¹ (¹ Chungbuk National University , ² LIG Defense&Aerospace Co., Ltd.)
3R03	Aerodynamic State Feedback Control of a VTOL Tailsitter UAV Using a Wide-Envelope Air Data System ○LEE Hosun ¹ , KIM Seonghoon ¹ , BANG Hyochoon ¹ (¹ KAIST)

10:10 - 11:10 Dynamics/Control/Avionics: Guidance and Control (9)

3R04	Performance Verification of a Flight Control System Using a Model Error Compensator under Varying Flight Conditions ○Yosuke Sugai ¹ , Akio Abe ² (¹ Graduate School of Science and Technology, Nihon University , ² College of Science and Technology, Nihon University)
3R05	Instantaneous Attitude Recovery Fault-Tolerant Control based on Axis-Decoupled RBFNN-INDI ○Bong-il Lee ¹ , Dongjin Lee ¹ (¹ Hanseo university)
3R06	UAV Trajectory Planning with Wireless Charging under Signal Temporal Logic Specifications ○Kazunobu Serizawa ¹ , Kazumune Hashimoto ¹ (¹ The University of Osaka)