Poster

Core Time 28 Oct.（Wed）16:00-17:00

Room B (Main Hall)

Aerodynamics and Design: Acoustics

P002	**Acoustic Characteristics Comparison of Ground Boards for eVTOL Inverted Microphone Measurements** 〇Min-Seo Jeong [1], Joong-Kwan Kim [1,2] ([1] Department of Aeronautical System Engineering, Hanseo University , [2] Department of Unmanned Aircraft Systems, Hanseo University)

Aerodynamics and Design: Aircraft,Helicopter,AAM and UAV Design

P003	**BOM-Based Sizing and Architecture of a Three-UAV System For Industrial Air-Quality Monitoring** 〇Min Soon Park [1], Jae-Sang Park [2] ([1] Korea Aerospace Research Institute , [2] Chungnam National University)
P004	**Monte Carlo-Based Evaluation of Fastener Stiffness Uncertainty for Modal Correlation of Satellite Structures** 〇Wei-Chuan Wu [1], Po-Yuan Tung [1], Jen-Chueh Kuo [1] ([1] Taiwan Space Agency)
P005	**A Multi-Airfoil Morphing Tilt-Wing VTOL UAV for Enhanced Stability: Design and Aerodynamic Simulation** 〇Lawrence CATOLOS [1], Sajid NISAR [2] ([1] 1st Year Masters Student , [2] Associate Professor)
P006	**Design and Optimization of a Electric Propulsion System with Power Distribution Control for Lift-Cruise UAVs** 〇Moonkyou Lee [1], Jin Young SUK [2], Su Hyun NAM [1] ([1] Dbrain , [2] chung-nam national Univ.)
P007-O	**Design and Flight Validation of a Quadrotor Tail-Sitter UAV** 〇Lihang Zhou [1], Zhou Zhou [1] ([1] School of Aeronautics, Northwestern Polytechnical University)
P008	**Static Stability Analysis of a Blended Wing Body(BWB) Aircraft in the Conceptual Design Phase** 〇Sanghyun Park [1], Young Min Park [1], Jaehoon Choi [1], Hak Min Lee [1] ([1] Korea Aerospace Research Institute)
P009	**Energy Harvesting from Flapping-Wing Motion to Enhance the Flight Endurance of a Tailless Flapping-Wing Micro Drone** 〇Kaewthep SIRIROTE [1], Yoshinobu INADA [2] ([1] Graduate School of Tokai University , [2] Tokai University)
P010	**Design of a Pantograph Mechanism Mounted on a Moving Vehicle for UAV Mid-Air Recovery** 〇Kim Young-Hun [1], Kim Joong-Kwan [1,2] ([1] Department of Aeronautical System Engineering, Hanseo University , [2] Department of Unmanned Aircraft Systems, Hanseo University)

Aerodynamics and Design: Computational Fluid Dynamics

P011	**Numerical Investigation of Aerodynamic Heating Induced by Shock-Shock Interaction on an Asymmetric Cylindrical Leading Edge** 〇Atsuki Yoshida [1], Ko Ogasawara [1] ([1] Tokyo University of Science)
P012	**Effects of Diffusion Modeling on the Linear Stability of a Hypersonic Boundary Layer in Thermo-Chemical Non-Equilibrium** 〇HYEONJIN LEE [1], DONGHUN PARK [1] ([1] BUSAN NATIONAL UNIVERSITY)
P015	**Deep-Learning Reconstruction of Building-Scale Urban Winds from Sparse Drone Measurements in Numerical Experiments** 〇Yuki Yasuda [1], Ryo Onishi [2], Daisuke Kubo [3], Atsushi Oosedo [3] ([1] Japan Agency for Marine-Earth Science and Technology , [2] Institute of Science Tokyo , [3] Japan Aerospace Exploration Agency)
P019	**Propeller Design for Multirotors with Cyclic Pitch Mechanism** 〇Eishun Kawarai [1], Yoh Murakami [1] ([1] Shinshu University)
P016	**Effect of Sidewall Angle on Vortex Formation in a Submerged Inlet** 〇Heejae Yang [1], Hyoung Jin Lee [1] ([1] Inha University)
P018	**Analysis of the Effects of Wind Flow Around Chimney Structures on the Aerodynamic Performance of Multicopter UAVs Using Computational Fluid Dynamics** 〇Myung-Jae Kim [2], Byoung-Soo Kim [1] ([1] Chungnam National Univ , [2] Korea Aerospace Research Institute)
P020	**Effect of Trailing-Edge Shape on the Unsteady Aerodynamics of a Flapping Airfoil** Lee Sangwon [1], Lee Donghoon [1], 〇Han Cheolheui [1] ([1] Korea National University of Transportation)
P021	**Reduced–order Modeling of Dynamic Instability in Coupling System of Reentry Capsule with Flowfield via Mode Decomposition** 〇Eito Suzuki [1], Shintaro Sato [1], Naofumi Ohnishi [1] ([1] Department of Aerospace Engineering, Tohoku University)

Aerodynamics and Design: Flow Visualization

P022	**Re-laminarization in helical coil pipe flow** 〇Naoki Saito [1], Tomoki Bannno [1], Takeshi Kanda [1] ([1] Chubu university)
P023	**Airfoil Characterization in Low Reynolds Number Supersonic Flow for the Development of Supersonic Mars Aircraft** 〇Tomoyuki Takizawa [1], Hanyu Ryouya [1], Numata Daiju [1] ([1] 東海大学)

Aerodynamics and Design: Unsteady Aerodynamics

P025-O	**Fluid-Structure Interaction Analysis of Aerodynamic Damping on the Vibration Characteristics of Film-Cooled Turbine Blades** 〇Zhuobin Ma [1], Yeda Lian [1], Canjing Cong [1], Leike Yang [1], Hao Li [1], Pengfei Gao [1], Hang Shen [2], Lanjie Niu [2] ([1] School of Civil Aviation, Northwestern Polytechnical University , [2] Science and Technology on Electromechanical Dynamic Laboratory)

Aerodynamics and Design: Wind Tunnel Testing

P026	**Bidirectional Heat Flux Profiles and Thermal Structure Evaluation of a Mach 2 Jet in the 0.4 MW Arc-Heated Plasma Wind Tunnel** ○Philyong Oh [1,2], Seong Min Hong [1,2] ([1] High-Enthalpy Plasma Research Center , [2] Jeonbuk National University)
P027	**Conical Flapping Mechanism Based on Avian Wing Motion** ○Nahyeon Kim [1], Woohyeok Choi [1], SeungUk Lee [1], Jong-Seob Han [1] ([1] Applied Aerodynamics Laboratory, Chungnam National University)
P028	**Experimental Investigation of Wake Characteristics of Low-Noise Propellers with Trailing-Edge Serrations** ○Hong Changjin [1], Kim Jintae [1], Han Jong-Seob [1] ([1] Chungnam National University)

Combustion and Propulsion: Cooling Systems

P030	**Ignition and combustion characteristics of solid propellant under low pressure** Wen Zhan [1], Jiang Yanfeng [1], Liu Peijin [1], ○Ao Wen [1] ([1] Northwestern Polytechnical University)
P031	**Multidisciplinary Design Optimization of a Suborbital Spaceplane Powered by a Pre-cooled Hypersonic Air-Breathing Engine** ○Takuma Watanabe [1,2], Hideyuki Taguchi [1,2], Takahiro Fujikawa [3,4] ([1] Tokyo University of Science , [2] Department of Mechanical and Aerospace Engineering , [3] The University of Tokyo , [4] Department of Aeronautics and Astronautics)

Combustion and Propulsion: Engines

P032	**Numerical Study on Combustion and Emission Performance of Main Combustor for a Certain Aero-Derivative Gas Turbine** ○Liu Darui [1] ([1] Nanjing University of Aeronautics and Astronautics, China)
P033	**High-Performance Premixed N2O/C3H6 Thruster for Next-Generation Small Satellites** ○Seung Yeop BAEK [1], Tae Young LEE [1], Sung Gwan NA [1], Taegyu KIM [1,2] ([1] Chosun university , [2] Spacelab)
P039	**Test and Performance Evaluation of a 445 N-class LOx/LNG Small Rocket Engine under Varying Film-cooling Conditions** Yun Hyeong Kang [1], Chang Han Bae [1], Dong Jae Jo [1], Tae Yun Lee [2], Seong Sik Kang [1], Sung Chan Ha [3], ○Jeong Soo Kim [3] ([1] Pukyong National University , [2] Hanwha Systems Co., Ltd. , [3] School of Mechanical Engineering, Pukyong National University)
P040	**Path-Tracing-Based Method for Latent Fault Path Analysis in Aero-Engine Air Systems** ○Jiaxing SHI [1], min HUANG [1,2], Ziqiang DENG [1], Fangyou CHENG [3], Chunping HU [3], Xuejun LIU [1] ([1] Beihang University , [2] ReliaChina Technology Co., Ltd, Suzhou, China , [3] AECC Nanjing Aero-Propulsion Co., Ltd.)

Combustion and Propulsion: Spacecraft Propulsion

P042	**Flashback and Pressure Drop Characteristics of A Nitrous Oxide-Ethane Premixed Thruster with A Sintered Metal Insert** ○Sunggwan Na [1], Taeyoung Lee [1], Seungyeop Baek [1], Taegyu Kim [1,2] ([1] Chosun University , [2] Spacelab)
P043	**Performance Evaluation of a HAN-Based 1-N Class EQM Monopropellant Thruster with Electric Ignition** ○Minwoong Kim [1], Taegyu Kim [1,2] ([1] Chosun University , [2] Spacelab)
P044	**Vacuum Hot-Fire and Pulse-Mode Operation of a Premixed Ethane/N_2O Thruster** ○Taeyoung Lee [2], Taegyu Kim [1,2] ([1] SpaceLab , [2] Chosun University)
P045	**PERFORMANCE VERIFICATION AND SPACE ENVIRONMENT TESTING OF AN ECSP GAS PROPULSION SYSTEM FOR THE NANO-SATELLITE, GAIMSAT-1** ○Jinha Hwang [1], Taegyu Kim [1,2], Myoungjin Kim [2] ([1] Chosun University , [2] Spacelab.inc)
P046	**Numerical Study on the Flow Characteristics of Supersonic Retropropulsion around a Launch Vehicle** ○Jeonghun Ko [1], Changwoo Kang [1] ([1] Jeonbuk National University)
P047	**Evaluation of the operating characteristics of a low-power external discharge End-Hall thruster** ○Shuka Aono [1], Hiroe Shizuku [1], Horisawa Hideyuki [1], Ikeda Tomoyuki [1] ([1] Tokai University)
P048	**Operating Characteristics Evaluation of Miniature Low-power Anode-layer Hall Thrusters** ○Runa Miyake [1], Takumi TSUJI [1], Tomoyuki Ikeda [1], Hideyuki Horisawa [1] ([1] Tokai Univercity)
P049	**Characterization of an External-Discharge Hall Thruster Using Alternative Propellants** ○Yuika Takeuchi [1], Kaho Suzuki [1], Shizuku Hiroe [1], Tomoyuki Ikeda [1], Hideyuki Horisawa [1] ([1] Tokai University)
P050	**Design Verification and Mission Scenario Validation of a Metal Additively Manufactured 20 N-Class Water Electrolysis Thruster for Lunar Exploration** ○SangJoon Lhim [1], Minsig Hwang [1], Hyoung Jin Lee [1] ([1] Inha University)
P051	**Influence of Magnetic Topology on Improvement of Miniature Low-power Anode-layer Hall Thrusters** ○Kaho SUZUKI [1], Shizuku HIROE [1], Hideyuki HORISAWA [1] ([1] Tokai University)

Dynamics/Control/Avionics: ATM/CNS/UAM

P055-O	**Implementation of the Kalman Filter for In-SAR Phase Unwrapping Using Experimental Data** Fang Zheng [2], Zhu Huizhu [2], Zhang Haihui [2], Zhou Junqi [2], Chen Tao [2], Zhang Hengyang [1], ○Chen Bo [3] ([1] Airforce Engineering University of China , [2] Aviation Industry of China (AVIC) , [3] Shanghai University)
P056	**Operational Field Demonstration of Collaborative Tactical Flow Management System** ○Daekeun Jeon [1], Hyounkyoung Kim [1], Myeongsook Jeong [1], Eun-Mi Oh [1], Somang Lee [1], Soyeun Kim [1], Younghoon Jang [1] ([1] Korea Aerospace Research Institute)
P057	**An Adaptable Agent-based Simulation Framework for Investigating Airport Ground Operations** ○Chelsea Shan Xian Ng [1], Eri Itoh [1] ([1] The University of Tokyo)

P059	**A Macroscopic Queueing Network Simulation Model for Narita Airport Infrastructure Layout Planning** ○Ryo Nakatsu [1], Eri Itoh [1] ([1] The University of Tokyo)
P060	**PSU System Design and Cooperative Traffic Management Architecture for Multiple PSUs in Urban Air Traffic Management** ○Eun Yeonju [1], Jeon Daekeun [1] ([1] Korea Aerospace Research Institute)
P061	**Phased Development of Advanced Air Mobility Networks in Japan's Chubu Region:** **A Route and Fare Feasibility Analysis** ○Taniguchi Tomohei [1], Yokoyama Kaito [1], Nishii Hiroshi [2], Shikano Aya [2] ([1] Mitsubishi Research Institute , [2] Juroku Research Institute)
P062	**A PointPillars–CenterPoint-Based CPU–GPU Hybrid 3D LiDAR Object Perception System for UAM** ○bonsoo koo [1] ([1] Korea Aerospace Research Institute, Daejeon, Republic of Korea)
P063	**Quantitative Analysis of the Impact of Corridor Width on Total Travel Time and Operational Risk in AAM Urban Access** ○Taniguchi Tomohei [1] ([1] Mitsubishi Research Institute)

Dynamics/Control/Avionics: Flight Simulation

P064	**Smoothing Time Optimization for LEO-Augmented GBAS** ○Nam Gihun [1], Do Jimin [1], Lee Jiyun [1] ([1] KAIST)
P065	**Navigation Performance Analysis of a Visual Positioning System for GNSS Fail-Safe Operation** ○Jaewon Chang [1] ([1] Korea Aerospace Research Institution)
P066	**Design and Certification Technology for Electric Propulsion System for UAM Based on Mathematical Models: Proposal of a Method for Constructing Mathematical Models of Aircraft** ○RYUICHI FUNAKISAKO [1], YOSHIYUKI NAKAMURA [1], MASAAKI YANAGIHARA [1] ([1] Shinshu University)
P067	**A 6-DOF HILS Framework with 3-DOF Testbed for eVTOL Flight-Control Verification Using Coreless-Motor-Based Aerodynamic Disturbance Emulation** ○InHak Oh [1,2], HeeSeok Shin [2], SungKyung Hong [1,2] ([1] Aerospace Systems Engineering, Sejong University, Seoul , [2] Intelligent Drone Convergence, Sejong University, Seoul)
P068	**Mixed Reality Flight Simulation of Trajectory-Based Operations** Jeffery Omorodion [1], ○Kamoonpuri Jafer [1], Jeong Jeongyun [1], Pratik Pradhan [1], Amitabha Ghosh [1], Joon Chung [1] ([1] Toronto Metropolitan University)
P069-O	**Effects of Jet Flow on Low-Speed Aerodynamic Performance of BWB Aircraft** ○Zhang Changjiu [1], Wang Zhen [1], Dong Haochen [1], Zhao Yan [1], Ma Kun [1] ([1] AVIC the First Aircraft Institute)

Dynamics/Control/Avionics: Guidance and Control

P070	**Emergency Landing Site Selection Using SOC-Dependent Dynamic Reachable Footprints for Urban Air Mobility** ○Eojin Kim [2,3], Sunghun Jung [2,3] ([1] Chosun University , [2] Department of Aerospace Engineering, Chosun University , [3] Republic of Korea)
P071	**Peak-First Altitude Planning for Rapid Multi-UAV Trajectory Generation in Wildfire Response Missions** KIM Gague [1], JEONG Yangjae [1], ○JANG Kwangwoo [1] ([1] Electronics and Telecommunications Research Institute , [2] Korea Advanced Institute of Science and Technology)
P072	**Experimental Validation of Robust Sliding Mode Position and Attitude Control for an eVTOL under Wind Disturbances** ○TaeGeun Park [1] ([1] Sejong University)
P074	**Dynamic Inversion Attitude Control with Stability Margin Guarantee** **Based on Euler-Angle Errors Derived from Quaternions** ○Daiki Kikuchi [1,2], Takahiro Fujikawa [3,4], Hikaru Aono [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)
P075	**Magnetic-Interface-Constrained Terminal Guidance and Control for Ground-Assisted Recovery of Small UAVs** ○Hahyun Myung [2], Jiwan KANG [2], Sunghun Jung [2] ([1] Chosun University , [2] Department of Aerospace Engineering, Chosun University)
P077	**Analysis of Optimal Trajectories of Minimum-Time Turns for a Small High-Performance Aircraft** ○Takumi Kobayashi [1], Hiroyuki Takano [1], Takeshi Yamasaki [1] ([1] National Defense Academy)
P078	**Ascent Trajectory Optimization of a Suborbital Spaceplane with Gimbal Angle Considering Thrust-Induced Pitching Moment** ○Yuha Kamata [1,3], Takahiro Fujikawa [2,4] ([1] Department of Mechanical and Aerospace Engineering , [2] Department of Aeronautics and Astronautics , [3] Tokyo University of Science , [4] The University of Tokyo)
P081-O	**An Integrated Time-Triggered PHM Architecture for Multirotor UAV Flight Test Safety Verification and Fault-Tolerant Control** ○Yifei LIU [1], Chao CHEN [1], Wensong SHEN [1], Yaojie MA [1] ([1] School of Aviation Industry, Xinjiang Institute of Engineering)
P082	**Probability-Aware Dual-Interceptor Trajectory Optimization under Terminal Uncertainty** ○Kyungil Kweon [1], Yechan Yang [1], Donghoon Seo [1], Jinyoung Suk [1], Seungkeun Kim [1] ([1] Dept. of Aerospace Engineering, Chungnam National Univ.)
P084	**Impulsive Model Predictive Control for Satellite Formation Flying** ○Jeongchan Kim [1], Henzeh Leeghim [1] ([1] Chosun University)
P085	**Indoor Search Drone for Fire Scenes Combining A* Path Planning and Control Barrier Functions** ○Doyoon Kim [1,2], Seung Keun Kim [2] ([1] KARI , [2] CNU , [3] Chungnam National University)
P086-O	**Multivariable self-adaptive control for direct force coupling issues during carrier-based aircraft landings** ○ShengQiao Wang [1] ([1] Dalian University of Technology)
P087-O	**Trajectory Prediction and Generation for High-Speed Aircraft Based on Time-Series Deep Learning and a Hybrid Dual-Driven Model** ○Zuohua Huang [1], Mu Fan [1], Dan Wang [1] ([1] Nanjing University of Aeronautics and Astronautics, China)

P088	**Model-Based Rate Enhancement Filter for Low-Rate Vision-Based UAVs Attitude Control** ○TaeGeon Lee [1,2], Trong Dong Do [1], Xuan Mung Nguyen [1], Sung Kyung Hong [1,2] ([1] Department of Aerospace Systems Engineering, Sejong University , [2] Department of Intelligent Drone Convergence, Sejong University)
P089	**ADMM-Based Variable Responsibility Allocation with High-Order Control Barrier Functions for Safe Multi-UAV Collision Avoidance** ○Jun Choi [1], Hyo-Sang Shin [1,2] ([1] Korea Advanced Institute of Science and Technology , [2] Cranfield University)
P090	**Shape-Aware Cargo Transport for a Free-Flyer with Control Barrier Functions** ○Seongjae Kim [1], Hyeongjun Park [1] ([1] Seoul National University)
P091	**Time-Adaptive Ghost-Risk CVaR for Lost-Agent Avoidance in Distributed MPC** ○Ha-Eun Kim [1], Hyo-Sang Shin [1,2] ([1] Korea Advanced Institute of Science and Technology , [2] Cranfield University)

Dynamics/Control/Avionics: Navigation

P092	**IMM-EKF Fusion of Magnetometer and Dual-UWB for UAV Heading Estimation under Magnetic Disturbance** ○JO TaeHyeon [2], YUN SuHwan [1], MOON SungTae [2] ([1] Railroad Safety & Environ. Div., Korea Railroad Research Inst. , [2] Dep. of Intelligent Systems & Robotics, Chungbuk Nat. Univ.)
P093	**Hardware-in-the-Loop Validation of a Lift-Cruise VTOL UAV for Environmental Monitoring Applications** Seongjun Yoo [1], ○Seungbum Kim [1] ([1] Korea Aerospace Research Institute)
P094	**Unified Longitudinal Control for Lift-and-Cruise eVTOL Aircraft** ○Yonghyeon Lee [1], Inhak Oh [1], Heeseok Shin [1], Sungkyung Hong [1] ([1] Sejong University)
P096	**Orbit Approximation Method and Accuracy Evaluation for Broadcast Ephemerides of Lunar Navigation Satellites** ○Suto Yuya [1], Ebinuma Takuji [1], Sobukawa Rion [1] ([1] Chubu University)
P097	**Ground Obstacle Detection System Development Using 3D LiDAR for UAM** ○INHO CHOI [1], Bonsoo Koo [1] ([1] KARI)
P098-O	**LLM-Semantic Enhanced Collaborative Navigation for Distributed Multi-UAV Systems** Han Yue [1], ○Yang Zheng [1] ([1] SADRI)
P100	**Cluster-Wise Distributed Localization for UAV Swarms Using Broadcast ADS-TWR and ADMM-Based Map Consensus** ○Sungmin Lee [1], Hyo-Sang Shin [1,2] ([1] Korea Advanced Institute of Science and Technology , [2] Cranfield University)

Dynamics/Control/Avionics: Satellite Attitude Control

P101	**Evaluation of Control Architectures for a 1U CubeSat Attitude Determination and Control System** ○Serkan Burak ÖRS [1], Chingiz HAJIYEV [2] ([1] Korean Advanced Institute of Science and Technology , [2] Istanbul Gelisim University)
P102-O	**Kernel Adaptive Filtering for SAR Satellite Yaw and Pitch Steering with the Complex Geometry Model** Fang Zheng [1], Zhu Huizhu [1], Zhang Haihui [1], Zhou Junqi [1], Chen Tao [1], Zhang Hengyang [2], ○Chen Bo [3] ([1] Aviation Industry of China (AVIC) , [2] Airforce Engineering University of China , [3] Shanghai University)

Dynamics/Control/Avionics: Sensors and Actuators

P105	**Design of One-Touch Coupler-Based Valve Release Mechanism and Holder for On-Orbit Refueling of Reusable Orbital Transfer Vehicles** ○dayeong kang [1], sori chon [1], gilsu park [1], teagyu kim [2] ([1] chosun university , [2] space rab)
P107	**A Study on Ground Target Tracking Techniques Utilizing Global Motion Compensation-Based Tracking-by-Detection** Sang-Hyeon Kim [1], ○Dae-Hyeon Jung [1], Gun-Hee Choi [1] ([1] Cheongju University)
P108	**Fault-Tolerant Voting Algorithm for Triple-Redundant Gyroscope in UAVs** ○TaeGeon Lee [1,2], Trong Dong Do [1], Xuan Mung Nguyen [1], Sung Kyung Hong [1,2] ([1] Department of Aerospace Systems Engineering, Sejong University , [2] Department of Intelligent Drone Convergence, Sejong University)

Space Science and Applications: Earth Observation& Com…

P109	**TeTra-Next-Inspired TWTA Aging Compensation Architecture for High-Throughput Ka-Band APSK Satellite Transmitters** ○Hong Won PARK [1] ([1] Korea Aerospace Research Institute)
P111	**Ship Velocity Estimation in Sentinel-1 Using Sub-Aperture Displacement** ○Yeonju Choi [1], Jeongwhan Choi [1] ([1] Republic of Korea Navy)
P112	**Adapting the NeQuick Ionosphere Model for 3D Ray Tracing Simulation of Residual Ionospheric Errors in GNSS RO** ○Jaehee Chang [1], Jiyun Lee [1] ([1] Korea Advanced Institute of Science and Technology)
P113	**Development of a prototype tool for multi-directional surface deformation estimation using InSAR data** ○Seung-Jae Lee [1], Sung-Ho Chae [1], Kwang-Jae Lee [1] ([1] Korea Aerospace Research Institute (KARI))

Space Science and Applications: Launch Vehicles

P115	**Ground Test Verification of KSLV-II Integrated Stage Separation System with Pyrotechnic Driving Units** ○Minho Jang [1,3], Lim Youchol [1], Yun Seok-teak [2], Kim Jonghoon [3] ([1] Korea Aerospace Research Institute , [2] Gyrongsang National University , [3] Chungnam National University)
P116	**FPGA Implementation of an IRIG 106 Chapter 7 Encoder for Video Data in the KSLV-III Telemetry System** ○Wonju Yoon [1] ([1] Korea Aerospace Research Institute)
P117	**A User-Oriented Workflow for KOMPSAT-5 SAR-Based Change Monitoring and Visualization** ○Sung-Ho Chae [1], Seung-Jae Lee [1], Kwan-Young Oh [1] ([1] Korea Aerospace Research Institute (KARI))

P118	**Preliminary Design of Instrumentation System Enhancements for the Propulsion System Test Complex** ○Yongun Jung [1], Dongki Kim [1], Yongwook Kim [1], Jungho Lee [1], Janghwan Lee [1], Yoonho Song [1] ([1] Korea Aerospace Research Institute)

Space Science and Applications: Lunar & Planetary Exp…

P119	**Thermal Environment Tests of Movable Thermosttating Unit for the Launch Operation of Korea Space Launch Vehicle II** ○Jeong Seok LEE [1], Bum Seok OH [1], Ju Yong Ko [1], Soohwan JUN [1], Choonghyo JANG [2] ([1] Korea Aerospace Research Institute , [2] Enerbest Co., Ltd)

Space Science and Applications: Payload, Instrumentation…

P120	**Integrated Verification Methodology for Multi-Mission State Transitions of LEO Earth Observation Payloads within a Single Test Window** ○Seunghun Ha [1], Sang-Gyu Lee [1] ([1] Korea Aerospace Research Institute)

Space Science and Applications: Small Satellites & Cube…

P121	**Probabilistic Lifetime Prediction of Spacecraft Materials under Atomic Oxygen Exposure Using Monte Carlo Simulation** ○Kyungjin Kwon [1], Guenyoung Park [1] ([1] korea aerospace research institute)

Structures and Materials: Composite Structures

P124	**Assessment of Wood Applicability to Space Missions Based on Thermal and Mechanical Property Measurements** ○Kim Kang-Hyun [1], Oh Kyung Min [1], Oh Hyun-Ung [1] ([1] Korea Aerospace University)
P122	**Mapping Cryogenic Microcracking in Composite Laminates: How Thermal Stress Fields evolve and Drive Damage** ○Wei Ma [4,5], Masaaki Nishikawa [4,5], Zhenzhou Wang [1,2,3] ([1] Institute of Cryogenics , [2] Energy technology group , [3] University of Southampton, Southampton, UK , [4] Department of Mechanical Engineering and Science , [5] Kyoto University, Kyoto, Japan)
P123	**Detection of Oblique Impact Damage in Carbon Fiber Reinforced Polymers Using Grid-Patterned Sensor Arrays** ○Eo-Jin Jeon [1], Chang-Yull Lee [1,2] ([1] Department of Aerospace Engineering, Inha University , [2] Aerospace Systems Research Institute, Inha University)
P126-O	**Study on the Effect Mechanism of Bending Properties of Resin-Based Composite Laminates for Aviation and the Standardization of Test Method** ○zeyang hao [1], yujie guan [1], jianjie wang [1] ([1] China Aero Polytechnology Establishment, Beijing 100028, CHINA)

Structures and Materials: Smart Structures

P127	**Design and Validation of SiCf/SiC-Based Broadband Multilayer Radar Absorbing Structures for High-Temperature Aerospace Applications** ○KyungHoon Bae [1], KyungHoon Bae [1], TaeWoong Kang [1], JongKwang Lee [1] ([1] Department of Mechanical engineering, Hanbat National university)
P128	**Design of Frequency Selective Surface Absorbers with Multi-Value Sheet Resistance Based on Laser-Induced Graphene** ○Jae-Gwang Ahn [1], Byeong-Cheol Choi [1], Byung-Woo Choi [1], Won-Jun Lee [1,2], Jong-Kwang Lee [3], Sang-Min Baek [1,2] ([1] University of Science and Technology , [2] Agency for Defense Development , [3] Hanbat National University)
P129	**Design and Fabrication of a Binder-Free Carbonyl Iron Powder Meta-Filled Honeycomb Core for Broadband Microwave Absorption** ○Byeongcheol Choi [2], Jaegwang Ahn [2], Byungwoo Choi [2], Sangmin Baek [1,2], Wonjun Lee [1,2] ([1] ADD , [2] UST)
P130	**Mapping Biological Folding Structures onto Pareto-optimal Design Space of Deployable Wings** ○Keishi HIRONO [1], Yuta NOMURA [1], Natsuki TSUSHIMA [1,2], Fujio TSUMORI [1] ([1] Kyushu University , [2] The University of Tokyo)
P131	**Design and Fabrication of High-Loss Graphene Electromagnetic Wave Absorbers via One-Step Thermal Plasma Synthesis and Surface Pattern Optimization** ○Choi Byungwoo [1], Choi Byeongcheol [1], Ahn Jaegwang [1], Baek Sangmin [1,2], Lee Wonjun [1,2] ([1] University of Science and Technology (UST) , [2] Agency for Defense Development (ADD))
P132	**Bionic design of smart structures and icephobic applications** ○LI XINLIN [1], LIU YANJU [1], LENG JINSONG [1] ([1] Harbin Institute of Technology)

Structures and Materials: Structural Analysis

P133	**MSR-Based Bayesian Optimization for High-Dimensional Finite Element Model Updating** ○Jea Hyeon Shin [1], Junho Lee [1], Jeong Ho Kim [1] ([1] Inha University)
P135	**Simplified Thermal Modeling of Spaceborne Mesh Fabrics for Antenna Reflector Surfaces** ○Min-Young Son [1], Hyun-Mo Sung [1], Bong-Gun Chae [2], Hyun-Ung Oh [1] ([1] Korea Aerospace University , [2] STEPLab. Ltd.)

Structures and Materials: Structural Dynamics and Control

P136	**Efficient unsteady fluid–structure interaction analysis for cavitating marine composite propeller** ○Sunghoon Kim [1,2], Sangjoon Shin [1] ([1] Seoul National University , [2] HD Hyundai Heavy Industries)
P137	**High-Strain-Rate Anisotropy of Single-Crystal Silicon: Dynamic Behavior and Structural Optimization of Aerospace MEMS Mechanisms** ○Zhuobin Ma [1], Yeda Lian [1], Leike Yang [1], Hao Li [1], Pengfei Gao [1], Hang Shen [2], Lanjie Niu [2] ([1] School of Civil Aviation, Northwestern Polytechnical University , [2] Science and Technology on Electromechanical Dynamic Laboratory)
P138	**Design and Experimental Modal Identification of a Sub-Scale Test Article for Ground Vibration Testing of a High-Speed Vehicle** ○Jun Young Kim [1,2,3], Yoon Gyungrak [1,2,3], Park Sangmin [1,2,3], Cho Haeseong [1,2,3] ([1] Jeonbuk National University , [2] Department of Aerospace Engineering , [3] Republic of Korea)
P139	**Creation Process of Space Structures on Ring-shaped Frame Connected by Variable Geometry Truss** ○Fumihiro Inoue [2], Momoe Terata [2], Satoshi Yuzawa [2], Hideaki Tanaka [2], Yoji Ishikawa [1] ([1] Obayashi Corporation , [2] Shonan Institute of Technology)

P140	**Analysis of Climber Drive Mechanism and Long Distance Experiment in Space Elevator** ○Momoe Terata [2], Fumihiro Inoue [2], Satoshi Yuzawa [2], Kazuya Kato [2], Yoji Ishikawa [1] ([1] Obayashi corporation , [2] Shonan Institute of Technology)
P141-O	**Quantitative Evaluation Framework and Comparative Study on Vibration Power Spectrum for Aerospace Electrical Connectors** ○Yajie Zhang [1], Zeyuan Chang [2], Jiajia Fan [2], Lei Hou [2], Liusheng LI [1], Xiujian JIA [1], Hui GUO [1] ([1] JONHON OPTRONIC TECHNOLOGY CO., LTD. , [2] Harbin Institute of Technology)
P142-O	**Kinematics Analysis and Dual-Loop PID Control of a 3-DOF Redundant Parallel Mechanism with Flexible Auxiliary Support for Aerospace Structural Testing** ○Leike Yang [1], Yeda Lian [1], Zhuobin Ma [1], Hao Li [1], Pengfei Gao [1], Hao Wu [2], Hucheng Fan [3], Hongxiao Chao [3], Qiang Lei [3] ([1] Northwestern Polytechnical University , [2] Xi'an University of Technology , [3] Northwest Institute of Mechanical and Electrical Engineering)
P143-O	**Design and Validation of an Eccentric Motor-Driven Deployment Mechanism for Petal-Type Deployable Solid-Surface Antennas** ○Gao Pengfei [1], Lian Yeda [1], Huang He [2], Li Hao [1], Yang Leike [1], Ma Zhuobin [1] ([1] School of Civil Aviation, Northwestern Polytechnical University , [2] School of Mechanics and Transportation Engineering, NPU)

Structures and Materials: Structural Testing

P144	**A Study on the Development of an Automated MRO System Using AI Vision** ○Seong-jun Shin [1], Seong-hun Kang [1], Yeon-gyeom Choo [1], Yeung-jun Jin [1] ([1] Korea National University of Transportation)
P146	**Evaluation of Material Properties of Various 7000 Series Aluminum Alloys Additively Manufactured by Wire Arc Welding** ○Minki Kim [1], Dongyoon Kim [1], Junseop Yun [1] ([1] Korea Institute of Industrial Technology)

System Engineering: Autonomous and Fault-Tolerant Systems

P147	**Quantitative Safety Assessment of eVTOL Systems Based on Fault Tree Analysis** ○Ju Yeong KIM [1], Gi Bong Hur [1] ([1] Gyeongsang National University)
P148	**A Hierarchical Optimization Method for Space Patrol Task Assignment Using Deep Neural Networks and Consensus-Based Bundle Algorithm** ○WEINAN WU [1], LETIAN ZHANG [1], CHUNLIN GONG [1] ([1] Northwestern Polytechnical University)
P149	**Phase-Conditioned Multi-Fidelity Adaptive Stress Testing for Rare Safety-Critical Failure Discovery and Risk Estimation in Hybrid eVTOL Operations** ○Jafer Kamoonpuri [1], Chung Joon [1] ([1] Toronto Metropolitan University)

System Engineering: Communication & OBDH

P150	**Data Flow Design for Atmospheric Environment Monitoring UAVs** Shin Heemin [1], ○Chang Jae Won [1], Kim Seung Bum [1] ([1] Korea Aerospace Research Institute)
P151	**Trading Range for Throughput: Joint Channel Modeling and Design Space Exploration for LoRa Direct-to-Satellite Links** ○Gergely Homoki [1], Hyochoong Bang [1] ([1] Korea Advanced Institute of Science and Technology)

System Engineering: Digital Engineering & Model-Based Sys…

P152	**A Reliability and Safety Requirement Identification Framework for Hydrogen Aeropropulsion Systems** ○Cankai LI [1], Min HUANG [1,2], Lin HAN [1], Ganyu PENG [2], Zhaojing WANG [3], Chunping HU [4], Xuejun LIU [1] ([1] Beihang University , [2] ReliaChina Technology Co., Ltd. , [3] Aviation Industry Development Research Center of China , [4] China Aviation Engine Nanjing Aero-Propulsion Co., Ltd.)
P153	**A Model Calibration Method for Functional Parameters Based on Bayesian Theory** ○Lin Han [1], Min Huang [2], Cankai Li [1], fangyou Cheng [3], Zhaojin Wang [4] ([1] Beihang University , [2] ReliaChina Technology Co.,Ltd , [3] China Aero Engine Nanjing Aviation Power Co., Ltd , [4] Aviation Industry Development Research Center of China)
P154	**Toward a Digital Twin of a UAV Turboprop Engine: Characterizing Component Degradation Signatures** ○se eun Park [1,3], Sung wook Cho [2,3] ([1] Department of Mechanical and Aeronautical Systems Engineering , [2] Department of Aeronautical and Mechanical Engineering , [3] in Cheongju University)

System Engineering: Multidisciplinary Engineering, AI…

P155	**Value Exploration of AAM Corridors Through a Systems and Design Thinking Workshop Methodology** ○Yusuke Mihara [1], Aki Nakamoto [1], Noriko Moriuchi [1], Tomoko Iijima [1], Naoki Matayoshi [1], Masaru Nakano [1] ([1] Keio University)
P156-O	**A Heterogeneous Ensemble Learning Strategy with PSO-Optimized Weighting for Temperature Prediction of Aerospace Servo Actuation Systems** ○Leike Yang [1], Yeda Lian [1], Zhuobin Ma [1], Hao Li [1], Pengfei Gao [1], Hao Wu [2], Hucheng Fan [3], Hongxiao Chao [3], Qiang Lei [3] ([1] Northwestern Polytechnical University , [2] Xi'an University of Technology , [3] Northwest Institute of Mechanical and Electrical Engineering)
P157	**A Refined Web Platform for Early-stage Design of Unmanned Vehicles - Designing under Uncertainties** ○Inyoung Lee [1], Sejung Yoo [1], Jinkyoung Kim [2], Jeongku Yun [2], Kwanjung Yee [1] ([1] Seoul National University , [2] Nextform)
P158	**3D Shape Estimation of Flying Birds Using Machine Learning** ○Ryotaro Sakata [1], Naoko Kishimoto [1], Yasuko Iwami [2], Naoki Tomita [2] ([1] Kwansei Gakuin Univercity , [2] Yamashina Institute for Ornithology)
P160	**Development of a Ground-Based Experimental Testbed for Gripper Docking Verification in On-Orbit Refueling Missions** ○Jinkwan Moon [1], Gwangmin Kim [1], Taegyu Kim [2], Gilsu Park [1] ([1] Chosun University , [2] Space Lab)
P161	**Iterative Latin Hypercube Sampling-Based Interceptor Missile Configuration Design** ○Jaehyun Jin [1] ([1] Sunchon National University, Korea)
P162	**From Aviation Investigation Reports to Evidence Anchored Accident Causation Networks** ○Shiwei Xin [1,2], Liang Dong [1,2], Chun-Hsien Chen [1,2] ([1] Nanyang Technological University , [2] Air Traffic Management Research Institute, Singapore)

P163-O	**Sustainable eVTOL Development for Urban Mobility** Xiaojia Zhao [1], ○Tianzheng Hu [1], Yihan Liu [1] ([1] Nanjing University of Aeronautics and Astronautics)

System Engineering: Power and Thermal Management Systems

P164	**Analysis of Power System Operational Conditions under Moon-Shadow Eclipse Environments for Large Low Earth Orbit Optical Satellites** ○Jin Hyuck Kim [2], Hyongho Ko [1] ([1] Chungnam National University , [2] Korea Aerospace Research Institute)

System Engineering: Software Engineering & AI Applications

P165	**Analyses of radiative heat flux sensor on launch vehicle** ○JONGMIN KIM [1] ([1] KOREA AEROSPACE RESEARCH INSTITUTE)