CONTENTS

Oral session

August 23 (WED)	**14:00~15:40**	Oral Session 1 **Session 3: Information Technology**	**Room 1 A428**
	14:00~15:40	Oral Session 2 **Session 1: Future Electric Facility Planning and Operations**	**Room 2 A432**
	14:00~15:40	Oral Session 3 **Session 3: Information Technology**	**Room 3 A434**
	14:00~15:40	Oral Session 4 **Session 3: Information Technology**	**Room 4 A435**
	14:00~15:40	Oral Session 5 **Session 3: Information Technology**	**Room 5 A437**

August 23 (WED)	**16:20~18:00**	Oral Session 6 **Session 1: Future Electric Facility Planning and Operations**	**Room 1 A428**
	16:20~18:00	Oral Session 7 **Session 3: Information Technology**	**Room 2 A432**
	16:20~18:00	Oral Session 8 **Session 3: Information Technology**	**Room 3 A434**
	16:20~18:00	Oral Session 9 **Session 3: Information Technology**	**Room 4 A435**
	16:20~18:00	Oral Session 10 **Session 3: Information Technology**	**Room 5 A437**

August 24 (THU)	14:00~15:40	Oral Session 11 **Session 4: Intelligent Transportation Technology**	**Room 1 A428**
	14:00~15:40	Oral Session 12 **Session 5: Aerospace Sciences and Aviation Technology**	**Room 2 A432**
	14:00~15:40	Oral Session 13 **Session 1: Future Electric Facility Planning and Operations**	**Room 3 A434**
	14:00~15:40	Oral Session 14 **Session 5: Aerospace Sciences and Aviation Technology**	**Room 4 A435**

Poster session

August 24 (THU) 12:00 ~ 15:10

[Building A 4th Floor]

DATE		Session	Conference Topics Session
August 24 (THU)	12:00~12:40	**Poster Session 1**	**Session 1: Future Electric Facility Planning and Operations** **Session 3: Information Technology**
	14:30~15:10	**Poster Session 2**	**Session 2: Smart Electric Facility** **Session 4: Intelligent Transportation Technology** **Session 5: Aerospace Sciences and Aviation Technology** **ETC**

Oral Session

Oral Session 1

		Wednesday, August 23, 14:00~15:40		Chair : Prof. Assel Mukasheva / Room : A428
1-1	36	Improved LQR control using fuzzy logic and Kalman filter controller of DC motor		Adil Maidanov L. N. Gumilyov Eurasian National University, Kazakhstan
1-2	44	Digital transformation of document support for enterprise quality management system		Shara Toibayeva Almaty University of Power Engineering and Telecommunications, Kazakhstan
1-3	54	On the issue of constructing and identifying the parameters of the piezometric pattern of pumping wells in the underground leaching of metals		Gulmira Bazil assistant professor AUPET, Kazakhstan
1-4	61	THE PROBLEM OF OPERATING MULTIDIMENSIONAL OBJECTS IN THERMAL POWER ENGINEERING		Laulassyn Abzhanova Almaty University of Power Engineering and Telecommunications (AUPET) named after G. Daukeev, Kazakhstan
1-5	149	ANALYSIS AND SYNTHESIS OF SINGLE-BIT ADDERS FOR MULTI-BIT ADDERS WITH SEQUENTIAL TRANSFERS		Assel Mukasheva AlmatyUniversityofPowerEngineeringandTelecommunications, Kazakhstan

Oral Session 2

		Wednesday, August 23, 14:00~15:40		Chair : Prof. Jung-Ju Kim / Room : A432
2-1	167	Ananlysis for Fault Characteristics of MMC in DC Distribution System		Jin-Sol Song Sungkyunkwan University, Korea
2-2	169	Assessment of Locational and Total Hosting Capacity of Distribution Network with Multi-type DGUs by Iterative Optimal Power Flow Method		S Jarjees Ul Hassan Sungkyunkwan University, Korea
2-3	168	Optimal Parameter Design of SCR-based Multi-module SSCB in MVDC Network		Jong-Myoung Kim Sungkyunkwan University, Korea
12-4	64	Development of models of interconnected elements of heat supply systems based on the digital twin		Gulmira Bazil assistant professor AUPET, Kazakhstan
2-5	170	Investigation of grounding schemes in hybrid (AC/DC) medium voltage distribution networks		Zeeshan Haider Sungkyunkwan University, Korea

Oral Session 3

		Wednesday, August 23, 14:00~15:40	Chair : Prof. Assel Mukasheva / Room : A434
3-1	14	Research and development of an information system for speech recognition based on neural network algorithms	Maksat Kanashev Almaty University of Power Engineering and Telecommunications, Kazakhstan
3-2	19	Research and development of sign language recognition system using neural network algorithm	Yegor Matveyas Almaty University of Power Engineering and Telecommunications (AUPET) named after G.Daukeev, Kazakhstan
3-3	41	Research and Development of a Chatbot Using Neural Network Technologies to Process Requests	Daniyar Kyzyrov IITU, Kazakhstan
3-4	131	Effective Multimodal Approach for Anomaly Detection in Heating, Ventilation, and Air Conditioning (HVAC) Systems of Railways using Time Series and Vision Transformers	Jeonghwan Gwak Korea National University of Transportation, Korea
3-5	130	Advancing Railway Fastener Segmentation: Harnessing the Power of ResUNet and Self-Supervised Learning Paradigms	Jeonghwan Gwak Korea National University of Transportation, Korea

Oral Session 4

		Wednesday, August 23, 14:00~15:40	Chair : Dr. Seungkwon Shin / Room : A435
4-1	16	CALCULATING FMEA VARIABLES OF SOFTWARE FAILURES RISKS BASED ON JOURNALS AND METRICS	Denis Valyayev Almaty University of Power Engineering and Telecommunications, Kazakhstan
4-2	18	Comparative analysis of Hadoop and Spark performance through different data processing tasks	Yerulan Suinullayev Almaty university of power engineering and telecommunications, Kazakhstan
4-3	46	The Use Of Machine Learning Methods In The Field Of Retail	Neila Kuanyshbek Kazakh national university named al Farabi, Kazakhstan
4-4	57	Development of a fire protection system using image recognition technologies.	Mirzhan Abdildayev International University of Information Technologies, Kazakhstan
4-5	135	A study on false defect management of PCB ICT inspection using failure rate Estimation	Chang Mok Park Induk University, Korea

Oral Session 5

-Wednesday, August 23, 14:00~15:40			Chair : <mark>Dr. Cheol Min Park</mark>/ Room : A437
5-1	37	VIDEO STREAM ANALYSIS ALGORITHMS BASED ON THE OPENCV LIBRARY USING THE RASPBERRY P S PLATFORM	Adilzhan Kereyev K.Zhubanov Aktobe Regional University, Kazakhstan
5-2	82	Internet of Things attack and security analysis	Aigul Adamova Astana IT University, Kazakhstan
5-3	112	IoT watering robot in technologies of variable irrigation rationing in precision agriculture	Yerlan Zaitin Al-Farabi Kazakh National University, Kazakhstan
5-4	72	Cache Replacement Policy for Approximate Computing in Many Core Systems	Juhee Choi Sangmyung University, Korea

<mark>Oral Session 6</mark>

Wednesday, August 23, 16:20~18:00			Chair : Prof. Yemar Amitov / Room : A428
6-1	74	Fire investigation mobile application using the external features of the arc site	Seongjun Hong Korea electrical Safety Corporation, Korea
6-2	4	Design and Research of the Nonlinear State Model of the Induction Electrical Drive with the Extended Kalman Filter for the Heat Power Pumping System	Bukhar Kussainov Almaty University of Power Engineering and Telecommunications, Kazakhstan
6-3	97	Isolated control circuit design for heater power supply of high power magnetron	Hyunbin Jo Chung Ang University, Korea
<mark>6-4</mark>	<mark>68</mark>	<mark>Probabilistic state estimation of voltages of low voltage grid with large PV units.</mark>	<mark>Dmitriy Kim Narxoz University, Kazakhstan</mark>
6-5	124	Interleaving control effect of Three Level Boost Converter applied to solar power generation system with individual input power	Hae In Kim Korea National University of Transportation, Korea

Oral Session 7

		Wednesday, August 23, 16:20~18:00	Chair : Prof. Jae Sang Cha / Room : A432
7-1	5	Analysis of client-side and server-side attacks in the context of web applications	Adlet Smailov L.N.Gumilyov Eurasian National University, Kazakhstan
7-2	6	Security of containers and containerization environments	Amir Abdreev L.N.Gumilyov Eurasian National University, Kazakhstan
7-3	17	Research and development of two-factor authentication methods using neural networks	Temirkhan Darbek AUPET, Kazakhstan
7-4	53	Design and Implementation of an Electronic Voting System Using the IBM Blockchain Platform	Dina Satybaldina L.N. Gumilyov Eurasian National University, Kazakhstan
7-5	3	Study of Network Virtualization Security in Public Network	Junwon Lee Samsung SDS, Korea, Republic of
7-1	162	DEVELOP AN ATTACK DETECTION ALGORITHM MODEL AND COMPARE WITH THE K-MEANS ALGORITHM	DASHDORJ Yamkhin School of Information and Communication Technology, Mongolian Univ of Science and Technology, Mongolia

Oral Session 8

		Wednesday, August 23, 16:20~18:00	Chair : Prof. Jeonghwan Gwak / Room : A434
8-1	86	Simulation of computer vision systems with artificial intelligence	Perizat Rakhmetova Satbayev University, Kazakhstan
8-2	66	Integration of Penalty Functions and Performance Criteria for Enhanced Optimization in Optimal Control Problems using Artificial Immune System Algorithms	Olga Shiryayeva Satbayev University, Kazakhstan
8-3	132	Channel-Wise Anomaly Localization in Metro Vehicle Brake Systems using Deep Learning and Class Activation Maps	Jeonghwan Gwak Korea National University of Transportation, Korea
8-4	134	Advancement in Rail Defect Detection Using YOLO-NAS: A Neural Architecture Search Approach	Jeonghwan Gwak Korea National University of Transportation, Korea
8-5	50	Deep Learning Approach for Segmenting Visual Traits of Short-Circuit Arc Beads Marks Using Visual Geometry Group Algorithms	Shazia Batool Jeonbuk National University, Korea
8-6	118	Development of computer-aided diagnosis methods based on radiological images	Tamiris Bekbossynova Al-Farabi Kazakh National University, Kazakhstan

Oral Session 9

		Wednesday, August 23, 16:20~18:00	Chair : Prof. Won Sik Moon / Room : A435
9-1	161	ANeuralNetworkBasedApproachforDiseasePredictionUsingSymptomData: Uncovering Hidden Relationships and Improving Diagnostic Accuracy	Zolzaya Dashdorj Assoc Prof, Mongolia
9-2	59	APPLICATION OF MACHINE LEARNING TO DISTRICT HEATING SYSTEMS	Gulmira azil assistant professor AUPET, Kazakhstan
9-3	77	SYSTEM OF INTELLIGENT CONTROL OF PROCESSES OF DEVELOPMENT AND HARMONIZATION OF STANDARDS IN THE FIELD OF MILITARY AND SPACE ACTIVITIES ON THE BASIS OF ONTOLOGICAL ENGINEERING	Zhanna Suimenbayeva Almaty University of Power Engineering and Telecommunications named Gumarbek Daukeev, Kazakhstan
9-4	73	Creating a set of programs for road construction planning based on a raster digital elevation model of mountainous terrain	Ansar Khussainov AUPET, Kazakhstan
9-5	107	Relevance of temperature control of the fuel preparation process in boiler plants	Laulassyn Abzhanova Almaty University of Power Engineering and Telecommunications (AUPET) named after G. Daukeev, Kazakhstan

Oral Session 10

		Wednesday, August 23, 16:20~18:00	Chair : Prof. Juhee Choi / Room : A437
10-1	13	Algorithms of Methodology for Applying Augmented Reality in Teaching Physics	Beken Arymbekov Al-Farabi Kazakh National University, Kazakhstan
10-2	23	Utilizing Plane Detection Technology based on Actual Physical Environment for Classroom Experiments	Juhee Choi Sangmyung University, Korea
10-3	92	Developing Cost-Effective VR Trackers for improving Metaverse Interactions	Juhee Choi Sangmyung University, Korea
10-4	62	Detection and Classification of the Volatile Organic Compounds from the Petroleum and Petroleum-Derived Products Using an Electronic Nose and Machine Learning Algorithms	Dina Satybaldina L.N. Gumilyov Eurasian National University, Kazakhstan
10-5	69	LoRaWAN Optimization for monitoring of randomly fluctuated parameters	Dmitriy Kim Narxoz University, Kazakhstan

Oral Session 11

	Thursday, August 24, 14:00~15:40		Chair : Prof. Gani Balbaev / Room : A428
11-1	160	Enhancing Public Bus Line Classification and User Route Estimation through Deep Learning: A Comprehensive Analysis and Predictive Modeling Approach	Zolzaya Dashdorj Assoc Prof, Mongolia
11-2	133	AUTOMATIC TRAIN DRIVING SYSTEMS WITH THE USE OF GPRS COMMUNICATION IN THE REPUBLIC OF KAZAKHSTAN	Temyrbay Chigambayev ALT, Kazakhstan
11-3	140	Investigation of the working process of excavating and transport machines with an inertial rotor of the lower unloading	Rustem ozbagarov Associate Professor, Kazakhstan
11-4	12	Development of Fault Diagnostic Simulator for Machine Learning and Durability Test Equipment of Air-Type Door System for Electric Railway Vehicles	Gil Hyun Kang Korea National University of Transportation, Korea
11-5	146	Electric vehicles and its development prospects in the Republic of Kazakhstan	Rustem Kozbagarov Associate Professor, Kazakhstan

Oral Session 12

	Thursday, August 24, 14:00~15:40		Chair : Dr. Seungkwon Shin / Room : A434
12-1	153	Mathematical Modeling of a Star Sensor	Kuanysh Alipbayev Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev, Kazakhstan
12-2	29	Target selection by a group of unmanned aerial vehicles based on a swarm approach	Sholpan Jomartova Al-Farabi Kazakh National University, Kazakhstan
12-3	152	DEVELOPMENT OF AN ADAPTIVE DRIVE FOR AEROSPACE ENGINEERING	Kuanysh Alipbayev Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev, Kazakhstan
12-4	154	Underwater robot propulsion system	Kuanysh Alipbayev Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev, Kazakhstan
12-5	155	Research and design of an efficient adaptive drive with balancing friction coupling	Kuanysh Alipbayev Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev, Kazakhstan

Oral Session 13

	Thursday, August 24, 14:00~15:40		Chair : Prof. Ainur Begimbetova / Room : A432
13-1	47	METHOD OF PREDICTING THE SERVICE LIFE OF A LINEAR ADJUSTMENT TRANSFORMER BASED ON THE ANALYSIS OF OPERATIONAL RELIABILITY DATA	Irbulat UTEPBERGENOV Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev, Kazakhstan
13-2	123	Sensorless operation of six-phase PMSM based on high-frequency signal injection with torque ripple reduction method	Seonghoon Kim Electric engineering, Korea
13-3	138	Integration Strategies for Improving Grid Stability in Jeju Island's Power System using Virtual Power Plants (VPP)	Ji-Won Lee Soongsil University, Korea
13-4	28	Investigationofthedirectandinverseproblemofthermalconductivity of a rod	Sholpan Jomartova Al-Farabi Kazakh National University, Kazakhstan

Oral Session 14

	Thursday, August 24, 14:00~15:40		Chair : Prof. Kuanysh Alipbaev / Room : A435
14-1	128	Finding trends in the development of narrow beam inter-satellite communication antennas for Cubesat satellites using patent analysis	Zhanna Suimenbayeva Almaty University of Power Engineering and Telecommunications named Gumarbek Daukeev, Kazakhstan
14-2	129	The study of the structure of secondary aluminum alloys depending on the modes of heat treatment	Aizhan Mailybayeva employee, Kazakhstan
14-3	71	A method for improving the accuracy of navigation receivers using GPS as an example.	Ansar Khussainov AUPET, Kazakhstan
14-4	83	Development of a nanosatellite stabilization algorithm	Ansar Khussainov AUPET, Kazakhstan
14-5	84	Study of vegetation contamination on street sections with rocket fuel components	Ansar Khussainov AUPET, Kazakhstan
14-6	85	Mobile robotic analysis methodology used for space research	Ansar Khussainov AUPET, Kazakhstan

Poster Session 1

Chair 1: Prof. Jeamoon Kim / Korea National University of Transportation, Korea

PS1-01	49	A Study on the Partial Discharge Characteristics of VTs and CTs by Applying Repeated Impulses	JIMAN PARK Research Institute Korea Electrical Safety Corporation Korea
PS1-02	52	An Application of Terahertz Wave for Detecting Insulation Defects in 22.9kv XLPE Power Cable	JIMAN PARK Research Institute Korea Electrical Safety Corporation Korea
PS1-03	87	A Study on the On/off-line Framework for Asset Management of 154 kV Electrical Facilities	Young kyu MO Safety Research Dept. Electrical Safety Research Institute Korea Electrical Safety Corporation Korea
PS1-04	91	Design of Real-Time Monitoring/Diagnosis Algorithm for Electrical Facilities	Joonho Ahn Future Innovation Institute Electrical Safety Device Research Center Korea
PS1-05	93	Leakage current analysis of PCS considering the ground system	Hanju Cha Dept. of Electrical Engineering Chungnam National University Korea
PS1-06	24	A study on the effect of common mode voltage generated by transformer grounding method on energy storage system	Yong-Eun Choi Korean National University of Transportation Transportation System Engineering Korea
PS1-07	101	Development of 48V PbC Hybrid Battery for Electric Forklift Using High Quality Activated Carbon	Hoon Seo CEO DongYoung Ind. Co.Ltd Korea
PS1-08	122	Properties analysis of carbon nanofiber spun to carbon nanowall electrode	Kangmin Kim Department of Electrical Engineering Hanbat National University Korea
PS1-09	125	Characteristic analysis according to a annealing treatment temperature of functional coating film synthesized on PV module cover glass	Seungcheol Yoo Electrical Engineering Hanbat National University Korea
PS1-10	144	A Study on the Forecasting Algorithm of Dew Point Temperature Based on Linear Regression in the Battery Room	JOON-HO SON Korea electrical safety corporation Electrical safety research institute Korea
PS1-11	141	INTRODUCTION OF BIOGAS TECHNOLOGY FOR EFFICIENT WASTE PROCESSING	Маржан Отынчиева Narxoz University, Almaty, Kazakhstan Narxoz University, Almaty, Kazakhstan Kazakhstan
PS1-12	51	Comparison of VARC Interrupting Module Topologies for Enhancing Interruption of Superconducting VARC Breaker	Daeseong Jang Electrical Engineering Chosun University Korea
PS1-13	55	A New Algorithm for Optimal Frequency Selection in Superconducting LC Resonant DC Circuit Breaker	Jihye Kim Electrical Engineering Chosun University Korea
PS1-14	80	Fault Analysis in the Occurrence of Arc and Leakage Currents in DC Lines	So-Yeon Han Dept. of Future Technology Convergence Engineering GwangJu Unit Korea
PS1-15	81	Fault Analysis of Leakage Current in Low-Voltage Direct Current Distribution Using Level Shift	Su-Chul Bang Dept. of Future Technology Convergence Engineering Gwangju University Korea
PS1-16	88	Development of WLS State Estimation Algorithm for Bipolar DC Distribution System	HANSANG LEE Department of Electrical Engineering Semyung University Korea
PS1-17	20	Using IoT technologies to prevent fires	Gulzat Ziyatbekova Al-Farabi Kazakh National University, Almaty, Kazakhstan Al-Farabi Kazakh National University, Almaty, Kazakhstan Kazakhstan
PS1-18	115	Implementation of Real-time Water Quality Monitoring for Energy Consumption Optimization Utilizing IoT Sensors in a Smart Fish Farm	Hunseo Lee Electrical Engineering Hanbat National University Korea
PS1-19	165	Implementation of IoT-based smart elevator remote regeneration control monitoring system platform	SANG MIN LEE Division of Creative Convergence KOREA NATIONAL UNIVERSITY OF TRANSPORTATION Korea
PS1-20	56	The Implementation Portable Power Quality Analyzing Software for Switchgear, Distributing Board	SangYule Choi The department of mechatronics engineering Induk University Korea

Poster Session 1

		Thursday, August 24, 12:00~12:40	Room : Building A 4th Floor
		Chair 2: Prof. Ainur Begimbetova / AUPET, Kazakhsatn	
PS1-21	45	A REAL-TIME DETECTION MODEL FOR MASK WEARING IN COMPLEX SCENES BASED ON YOLOV5	Yelidana Yilibule Information System Kaznu Kazakhstan
PS1-22	67	A Study of Deep Learning Model for Color Measuring Process in Industrial Facilities	Jeong Won Kang Department of Transportation System Engineering Korea National University of Transportation Korea
PS1-23	147	DEVELOPMENT OF DUAL AUTHENTICATION THROUGH BLOCKCHAIN WALLET ACCOUNT (DABWA) MODULE FOR WEB-APPLICATIONS	Shakirt Makilenov Cybersecurity International Information Technology University Kazakhstan
PS1-24	96	DEVELOPMENT OF A LUNG CT IMAGE PROCESSING SYSTEM FOR MACHINE DIAGNOSTICS OF COPD SYMPTOMS	Bagila Joldass information technology KazNU Kazakhstan
PS1-25	103	Research and development of an automated installation based on modern technology to determine the degree of ambient air pollution	Samal Beksultanovna Abdreshova Artificial Intelligence and BD Al-Farabi Kazakh National University Kazakhstan
PS1-26	108	Data mining of leading indicators	Laura Alimbayeva Information Technology Al-Farabi Kazakh National University Kazakhstan
PS1-27	113	Medical information search engine development	Aidana Ilip Student AL and Big Data Kazakhstan
PS1-28	79	Data-Driven Enhanced Travel Planning by Utilizing Real-Time User Data	Juhee Choi Smart Information Communication Engineering Sangmyung University Korea
PS1-29	159	A Study on Reuse Policy for Worn-out Cells in Non-Volatile Memories	Juhee Choi Smart Information Communication Engineering Sangmyung University Korea
PS1-30	33	Development of Analytical Computation System and its Application to Automation of Equation Derivation of Robotics Systems	Gulzat Ziyatbekova Al-Farabi Kazakh National University, Almaty, Kazakhstan Al-Farabi Kazakh National University, Almaty, Kazakhstan Kazakhstan
PS1-31	99	MATHEMATICAL MODELING AND DEVELOPMENT OF AUTOMATED FIRE MONITORING SYSTEM	Sametova A Aigerim IT-engineering Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev Kazakhstan
PS1-32	100	Advanced method for working with discrete objects	Mukhit Maikotov IT engeneering AUES Kazakhstan
PS1-33	31	Phased Array Ultrasonic Examination of Wheels of High Speed Vehicles model study	Hyeong Jeong Kang Department of SMART Railway System Korea National University of Transportation Korea
PS1-34	136	ICT Convergence Roof Installation Solar Location Tracking Solar Power Generation System	DeokGun Woo Def. of Intellingent Mechanical Engineering Korea Polytechnics Korea
PS1-35	143	Study on the collapsing of artificial retaining wall facility using acoustic emission	KIM KWANG BOK R&D Center Integrity Diagnostic Korea Korea
PS1-36	116	TECHNIQUE FOR THE USE OF MATCHING CIRCUITS IN THE TRANSMIT-RECEIVE PATH OF THE UAV RADIO CONTROL CHANNEL IN CONDITIONS OF ICING OF THE ANTENNA DEVICE	Nurbolat Myrzageldyuly Ondyrbayev Department of Science and Commercialization Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeev Kazakhstan
PS1-37	98	Designing a special mobility (hot air balloon) communication interface	Byun Seung-Hwan Bio-Health Convergence and Open sharing System Daejeon University Korea
PS1-38	157	Direct train-to-train(T2T) communication for improved reliability	YOUNGJUNG KIM SEOUL NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY Department of Railway Electical and Signal Engineering Korea

Poster Session 2

		Thursday, August 24, 14:30~15:10	Room : Building A 4th Floor
		Chair 3: Prof. Jeamoon Kim / Korea National University of Transportation, Korea	
PS1-39	163	A rectangular gate structure with attachable sanitary lights and human monitoring camera	Jaesang CHA Dept. of ELECTRICAL & ELECTRONIC ENG. CHIBA UNIV. Japan
PS1-40	171	A development of IoT switching and control box application used in various power source choice and sanitary light control functions	Jaesang CHA Dept. of ELECTRICAL & ELECTRONIC ENG. CHIBA UNIV. Japan
PS1-41	95	SW design and implementation for remote power facility monitoring and control	JungHoon Lee Electrical Engineering DongSeoul University Korea
PS1-42	137	Structural Properties of CNWs According to Various Metal Interlayer	Chulsoo Kim electrical engineering Hanbat National University Korea
PS1-43	148	Color-changing gas sensor based on TPU nanofibers for deterioration detection of electric power system	Seokhun Kwon Electrical Engineering Hanbat National University Korea
PS1-44	120	On the Electrical Safety Analysis of Multi-chute Classification System for Joint Courier Logistics Base Infrastructure based STPA	Sunwoo Hwang Systems Engineering Ajou University Korea
PS1-45	139	Development of a self-adjusting transmission of a transport vehicle and an electric vehicle with adaptive motor-wheels	Beibit Beka Shingissov Motor Vechiles and Safety Head departament Kazakhstan
PS1-46	32	The Remote Driving Control System Based on Telepresence for Mini-tram	Jung-Ju Kim Department of Robotics Hoseo University Korea
PS1-47	121	On the Derivation of Demand Time for Response to Variable Focus Camera Situation	Min Joong Kim Systems Engineering Ajou University Korea
PS1-48	7	Machine-Learning based Condition Diagnosis Model of Heating, Ventilation and Air Conditioning System for Train Cars	Juhee Choi Smart Information Communication Engineering Sangmyung University Korea
PS1-49	90	A Study on Route Selection Methods of Autonomous Vehicles for Public Mobility	Jung-Ju Kim Department of Robotics Hoseo University Korea
PS1-50	114	A Model for Implementing Network-Connected Systems to Train Control Systems	JONGWOO YI Electric Traction and Signaling Graduate School of Railway SNUST Korea
PS1-51	8	A Study on the Resolution of Transitional Conditions by Analysis of Spark Gap Characteristics of Electric Railway Vehicles	종록 최 Smart & Management System for Advanced Rail Transport Korea National University of Transportation Korea
PS1-52	9	Development of Trolley for Detection Installation Errors of Catenary System	Chulmin PARK Samrt Electrical & Signaling Division Korea Railroad Research Institute Korea
PS1-53	10	Research on the development and construction of lightweight catenary poles for emergency recovery	CHO HORYUNG R&D part OCS solution Co., Ltd. Korea
PS1-54	27	A Study on the Characteristics of Power System Protection System According to Regenerative Braking of Urban Railway Vehicles	park jong hak Department of SMART Railway System Korea National University of Transportation Korea
PS1-55	38	A study on stabilization of code frequency control between wayside and onboard signalling devices of AF non-insulated track circuit device	Hoon Dong Park Smart & Safe Management System For Advanced Rail Transport Korea National University of Ttansportation Korea
PS1-56	39	A Study on the Integrated Operation of VHF and Complex Communication Facilities	SEON KYO KIM SMART Railway Systems Department Korea National University of Transportation Korea
PS1-57	42	A Study on Condition-Based Maintenance Application of Power Capacitor for SIV in Railway Vehicles	HyoSeok Oh Transportation System Engineering Korea National University of Transportation Korea
PS1-58	43	A Study on SoH of Lithium Polymer Battery Applied to Railway Vehicles	HyoSeok Oh Transportation System Engineering Korea National University of Transportation Korea

Poster Session 2

PS1-59	48	Automatic Charging System Development of Electric Bus using Pantograph	SEUNG KWON SHIN Smart Electrical & Signaling Division Korea Railroad Research Institute Korea
PS1-60	106	Analysis of the Reduction Effect due to the Increase Harmonic Resonance in the AC Electric Railway Feeding System	HYUN GUK SON SMART Railroad System Department KOREA NATIONAL UNIVERSITY OF TRANSPORTATION Korea
PS1-61	117	A Study on the Train Position Detection for the Integrity of Freight Train Based on ETCS Level 3 with GPS and 6-Axis Sensors	seonyong jeon Railroad Electrical and Signal Engineering SEOUL NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY Korea
PS1-62	119	An Analysis of the Changes of Regenerative Energy Utilization Facilities by the Tap Switching of Urban Railway Transformers	Chi-Myeong Yun Electrification System Research Department Korean Railroad Research Institute Korea
PS1-63	126	A Study on the Automation Methods for Railway Substation Based on IEC 61850	Kyungsun Park Railway Safety Graduate School of Railway Seoul National University of Science and Technology Korea
PS1-64	145	A Study on the LCC Analysis for High-Speed Train On-Board Signaling Systems	Jung jae Lee Graduated School of Railway Seoul National University of Technology and Science Korea
PS1-65	150	Model Reduction for Computational Optimization for MVDC Railway System Simulation	Hwanhee Cho Electrification System Research Department Korea Railroad Research Institute Korea
PS1-66	156	A study on railway MCB's insert and break at DC and AC dead-section	DALSEO PARK SEOUL NATIIONAL UNIVERSITY OF SCIENCE AND TECHNOL Department of Railway Safety Engineering Korea
PS1-67	164	Specification Analysis of Reducer-less Motor for Railway Vehicle Door	Moon ByungMin Transportation System Engineering Korea National University of Transportation Korea
PS1-68	166	Analysis of Platform Screen Door Using Reliability Block Diagram Analysis Tool	Jeong Won Kang Department of Transportation System Engineering Korea National University of Transportation Korea
PS1-69	172	A Study on High-Power IGBT Gate Drivers for Railway Vehicle	seungpyo jeon Transportation Systems Engineering, Korea National University of Transportation, Korea
PS1-70	70	Full-Stack Simulator for Non-Volatile Memories-based Computing Elements for Railway Safety	Juhee Choi Smart Information Communication Engineering Sangmyung University Korea
PS1-71	158	A Study on the Optimal Traffic Signal Timing Transition Algorithms for Diverse Demand Fluctuations on Corridors	Yong-Bin Cho Department of Transportation Korea National University of Transportation Korea
PS1-72	105	Investigation of the output parameters of a definable adaptive gear variator.	Gulmira Nurlankyzy Abdreshova Faculty of Mechanics and Mathematics of Al-Farabi Kazakh National University Faculty of Mechanics and Mathematics of Al-Farabi Kazakh National University Kazakhstan
PS1-73	22	DEVELOPMENT OF AN INTEGRATED MULTIFUNCTIONAL COMPLEX FOR LIGHTING THE SPACE SITUATION	Anargul Talgatovna Boranbayeva AIPET, AUES AIPET, AUES Kazakhstan
PS1-74	30	Safety of aircraft operation in modern conditions	Gulnara Nauryzbayeva Space Engeneering Almaty University Power Engineering and Telecommunications after G. Daukeev Kazakhstan
PS1-75	151	Development of a methodology for calculating the energy consumption of a grouping of spacecraft.	Angsagan Kenzhegarayeva Institute of Telecommunications and Space Engineering Space Engineering Kazakhstan
PS1-76	11	THE CHOICE OF COMPUTATIONAL ALGORITHMS AND THE IMPROVEMENT OF THE QUALITY OF CYBERSECURITY SYSTEMS OF THE POST-QUANTUM ERA	Rat Berdibayev Information Systems and Cybersecurity Almaty University of Power Engineering and Telecommunications after Gumarbek Daukeyev Kazakhstan

PS1-77	75	A Molecular Dynamics Simulation Study on Superlubric Carbon-based Nanodevice	Jeong Won Kang Department of Transportation System Engineering Korea National University of Transportation Korea
PS1-78	78	Extracted Cellulose with Deep Eutectic Solvent and Ionic Liquid: Changes in Structural and Thermal Characteristcs	Jeong Won Kang Department of Transportation System Engineering Korea National University of Transportation Korea
PS1-79	94	Implementation of carbon neutrality through the RE100 verification system in the agricultural sector	Minseong Kang Smart Green Technology Center Korea Testing Laboratory Korea