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Maeda(Shibaura Inst. of Technology, Japan)

| | Manipulator using PDSPO and SMCSPO without Sensor Min Cheol Lee, Wang Jie, Hyun Hee Kim, Min Cheol Lee(Pusan National University, Korea) | |
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| | Technology Ladkrabang, Thailand) |

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| TC01-6 | Dynamics and Vibrational Control of an Underwater Inverted Pendulum Saqib Hasnain, Keum-Shik Hong(Pusan National University, Korea) | 644 |

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| TC03-5 | The model-free PID gain tuning for regulatory control based on generalized minimum variance evaluation with a feedfoward compensator Shotaro Takahashi, Shiro Masuda (Tokyo Metropolitan University, Japan) | 690 |
| TC03-6 | Fuzzy Compensation Technique for Cooperative Control between Two Actuations of an One-wheel Robot Sangdeok Lee, Seul Jung(Chungnam National University, Korea) | 692 |
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Development of multicopter that equipped with semi-auto control

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| TC05-3 | Extraction of GGO candidate regions from the LIDC database using deep learning <u>Kazuki Hirayama</u> , Hyoungseop Kim, Joo Kooi Tan(Kyushu Institute of Technology, Japan) | 724 |
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| TP-3 | Comparison Study of Time Delay Control (TDC) and Uncertainty and Disturbance Estimation (UDE) Based Control <u>Yun-Joo Nam</u> (Korea Institute of Industrial Technology (KITECH), Korea) | 749 |
| TP-4 | A Controller Reduction via Structurally Balanced Truncation using Coprime Factorization | 757 |

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<u>Tatsuya Yamazaki</u>, Wan Azizul, Tadahiro Hasegawa, Shin'ichi Yuta(Shibaura Institute of

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| TP-10 | Mill Load Control System Based on Chaotic Particle Swarm Neural Network <u>Jian-Xin Zhou</u> (North China University of Science And Technology, China) | 778 |
| TP-11 | Stability Analysis for Time-Varying Positive Linear Systems with Delays <u>Minmin Zhao</u> , Yuangong Sun(University of Jinan, China) | 782 |
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| TP-14 | Research of high response control technology of a moving coil electromechanical converter <u>Gong Zhang</u> (Guangzhou Institute of Advanced Technology, Chinese Academy of Science, China), Zheng Xu, Weijun Wang, Zhichen Hou, Xing Gu, Ning Lin, Liangwei Luo(Guangzhou Institute of Advanved Technology, Chinese Academy of Science, China), Jing Huang(Chengdu Technological University, China) | 797 |
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| TP-77 | Development of the Physical 3-Dimensional Dot Module System Composed of Self-Folding Origami Modules <u>Sa-Reum Kim</u> , Dae-Young Lee(Seoul National University, Korea), Je-Sung Koh(Harvard University, United States), Kyujin Cho(Seoul National University, Korea) | 1033 |
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| WA03-2 | Mechanism and Jumping Pattern of One-Legged Jumping Robot with Pneumatic Actuators Yuya Yamamoto, Haruyoshi Nishi(Kanagawa University, Japan), Yusuke Torii(Fuji Xerox Corporation, Japan), Atsuo Takanishi(Waseda University, Japan), Hun-ok Lim(Kanagawa University, Japan) | 1132 |

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| WA04-3 | Pressure ulcer breakout time estimation model in association with wearable robot use: first analysis | 1167 |
| | Chang-Hwan Lee, Kwan-Woong Gwak(Sejong university, Korea) | |
| WA04-4 | Human Injury Estimation Approach for Human-Robot Collision Safety <u>Sungsoo Rhim(KyungHee University, Korea), Heonseop Shin(MidasIT, Korea), Junewon Seo, Jin-</u> Hwan Choi(KyungHee University, Korea) | 1170 |
| WA04-5 | Experimental Study to Determine Quasi-Static Constitutive Parameters of the Pig-skin for Robot Collision Safety Estimation <u>Sanghoon Kim</u> , Junewon Seo, Junsuk Choi, Sungsoo Rhim(KyungHee University, Korea) | 1172 |

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| WA05-3 | Vibration control of a strip in a Continuous Galvanizing Line using Self-Tuning Neuro-PID controller <u>Junmin Park</u> , Hyungwoong Lee, Poogyeon Park(POSTECH, Korea) | 1183 |
| WA05-4 | Deep learning based modeling for the lateral movement of a strip in hot finishing mill Wookyong Kwon, Jaemin Baek, Soohee Han, Sangchul Won(POSTECH, Korea) | 1189 |
| WA05-5 | Control Methodology for Stabilized Strip Tracking in Tandem Cold Strip Mill | |

<u>Jae-Min Baek</u>, Wookyong Kwon(POSTECH, Korea), Jung-Hun Park(POSCO, Korea), Soohee Han(POSTECH, Korea)

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| WA06-5 | Dynamic Set Point Feedback Control using Steady State Detection <u>Somsin Tongkrirat</u> , Boonchana Purahong, Vanvisa Chutchavong(King Mongkut's Institute of Technology Ladkrabang, Thailand) | 1217 |
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| WB02-3 | Tuning ADRC for Multi-Variable System Based on Existing PID Parameters <u>Chunzhe Zhao</u> (Chongqing Three Gorges University, China), Donghai Li(Tsinghua Univ, China), Chun-E Huang(Beijing Union University, China) | 1272 |
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| WB04-5 | Fabrication of High-resolution Bridge-like 3D Interconnects using Electrohydrodynamic Inkjet Printing Byeong Wan An, Jang-Ung Park(UNIST, Korea) | 1329 |
| WB04-6 | Biomimetic Skin-type Shear Sensor Seonggi Kim, Cho-long Jung, Youngdo Jung(Korea Institute of Machinery and Materials, Korea), Hyungpil Moon(Sungkyunkwan University, Korea), Hyuneui Lim(Korea Institute of Machinery and Materials, Korea) | 1331 |
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| WB05-2 | PID Compensating Model for Design of Ship's Autopilot Youngkuk Kwon(Busan National Univ., Korea), <u>Seon-Ho Park</u> , Jang Myung Lee(Pusan National University, Korea) | 1337 |
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| WB05-5 | A Video Based People Counting Using Detection and Tracking Algorithm Jang Sik Park, <u>Baris H Baydargil</u> (Kyungsung University, Korea) | 1345 |
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Error Rate Measurement

Byungjun Kang, Seunghan Jo, <u>Hyungsuk Lee</u>(Yonsei University, Korea)

| | Nobuo Sasaki, Hiroki Shimada, Syunpei Shimada, Hiroki Kobayashi(National Institute of Technology, Gunma College, Japan) | |
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| WB06-6 | Probability Distribution of an Image Dictionary for Compressed Sensing <u>Yuhei Ashida</u> , Toshiaki Aida(Okayama University, Japan) | 1377 |

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| WP-12 | Wire System Junhyung Bae, Seonghun Lee, Dong-Hwan Shin, Jaeseung Hong, Jaeseong Lee(DGIST, Korea), | 1426 |
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| WP-14 | Performance Evaluation of Analytical Hybrid Redundancy System for Advanced Driver Assistance Systems Ji Hoon Kwon, Sang Hyeop Lee(Pusan National University, Korea), Man Ho Kim(Dong-eui Institute of Technology, Korea), Suk Lee(Pusan National University, Korea) | 1434 |
| WP-15 | Omni-directional Mobile Robot with Six-axes Force and Torque Sensor <u>Tae Hun Kang</u> , Hee Jin Park, Hyun Ju Lee, Jeon IL Moon(DGIST, Korea) | 1436 |
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| WP-17 | Observer Based Nonlinear Control using Barrier Lyapunov Function for Position Tracking of Sawyer Motor under Yaw Constraint <u>Donghoon Shin</u> (Mando Corporation, Korea), Youngwoo Lee(Hanyang university, Korea), Wonhee Kim(Chung-Ang University, Korea), Chung Choo Chung(Hanyang University, Korea) | 1440 |
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| WP-21 | Decoupled Disturbance Compensation Under Control Saturation with Discrete- Time Variable Structure Control Method in Industrial Servo Systems <u>Ji-Seok Han</u> , Dong-Il Dan Cho, Wook Bahn, Tae-Il Kim, Ji-Ho Park(Seoul National University, Korea), Sang-Sub Lee, Sang-Hoon Lee(RS Automation, Korea) | 1453 |
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