

2024 SICE Festival with Annual Conference (SICE FES 2024)

Kochi City, Japan
27-30 August 2024



IEEE Catalog Number: CFP24765-POD
ISBN: 979-8-3315-4446-1

**Copyright © 2024, The Society of Instrument and Control Engineers (SICE)
All Rights Reserved**

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP24765-POD
ISBN (Print-On-Demand): 979-8-3315-4446-1
ISBN (Online): 978-4-9077-6483-8

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

| | |
|--|----|
| Bayesian Optimization of Automatic Control Parameters for Hydraulic Excavators in Excavating Soft and Flat Soil | 1 |
| <i>Motoki Koyama, Masato Ishikawa, Naoki Morisawa, Masaya Imanishi, Hiroshi Suguro</i> | |
| ASPR-Based Adaptive Output Feedback Control with Robust Output Predictive FF Input for Suppression of Torque Fluctuations in SI Engines | 7 |
| <i>Ryusei Higuchi, Nozomu Kato, Ikuro Mizumoto</i> | |
| Disturbance Suppression for Adaptive Output Feedback Control System with NN Feedforward Input | 13 |
| <i>Takashi Kitaoka, Ikuro Mizumoto</i> | |
| Multi-Objective Rendezvous Operation Design Using Neural ODEs with Reservoir Computing Architecture for Trajectory Control Laws | 19 |
| <i>Satoshi Ueda, Hideaki Ogawa</i> | |
| Efficient Internal AC Heating System for CubeSat Power Storage Subsystems | 25 |
| <i>Punyapat Areerob, Nirut Phattanarat, Makarapun Makaramani, Chanon Khongprasongsiri, Sudchai Boonto</i> | |
| Rapid Control Prototyping of Random Forest Model and Its Performance Estimation by Simulation for Robotic Lawn Mower | 31 |
| <i>Touma Inami, Shuji Takahashi, Kazuhiro Motegi, Yoichi Shiraishi</i> | |
| An Assistive Tool for Adaptive Cognitive Training: A Cognitive Assessment System Based on Patient Interaction Responses | 35 |
| <i>Zhang Yuqi, Siew Chyanzheng, Takenori Obo, Kubota Naoyuki</i> | |
| Simple Analysis and Assessment Method for Activities of Daily Living Based on Joint Range of Motion to Develop Teaching/Recommender System | 41 |
| <i>Kohei Okabe, Daiki Shimotori, Kenji Kato</i> | |
| Path Encoding and Decoding for Articulated Robots Via Information Extraction | 47 |
| <i>Takeshi Nishida, Tsubasa Watanabe</i> | |
| A Depth Camera-Enabled Cobot Design for Electric Vehicle Charging | 52 |
| <i>Benjamas Panomruttanarug, Araya Kornwong, Sorrasak Promdum</i> | |
| Precision-Enhanced Trajectory Tracking in Robotic Arms Using Elite Genetic Algorithm and Iterative Learning Control | 57 |
| <i>Yu Dou, Emmanuel Prempain</i> | |
| 3D LiDAR-Based Lane Line Recognition and Obstacle Avoidance for Autonomous Mobile Robot - a Robust Approach Without Image Sensors | 63 |
| <i>Takuya Yamakawa, Koki Kubota, Kazuyuki Kobayashi, Tomoyuki Ohkubo, Kaiqiao Tian, Nashwan J Sebi, Ka C Cheok, Cai Changqing</i> | |
| Robot Zoo Aqua: Aquatic Control Testbed of Multiple USVs on Robot Operating System 2 | 70 |
| <i>Yo Toyomoto, Toshiyuki Oshima, Takeshi Hatanaka</i> | |
| Enhanced 3D Object Posture Estimation for Incomplete Point Clouds Using Fast Pattern Matching Technique | 76 |
| <i>Yu Iwai, Kazuki Sato, Takeshi Nishida</i> | |

| | |
|---|-----|
| Development of Microcontroller-Based Status Monitoring System for Diagnosis and Prognosis of Smart Factory | 82 |
| <i>C.-D. Chiang, Z.-Y. Huang, P.-C. Yang, Y.-C. Cheng, Y.-J. Guo, K.-S. Chen, S. Vechet</i> | |
| Efficient Comparison-Based Method for Modeling Individualized Facial Happiness Assessment..... | 88 |
| <i>Yuki Kurauchi, Masahiro Kohjima, Yuta Nambu, Hisashi Matsukawa</i> | |
| A Method for Predicting Plantar Pressure Using 3D Keypoint Coordinates During Walking | 95 |
| <i>Jundai Nagata, Hiroshi Hanaizumi, Yoshiteru Watanabe</i> | |
| Matrix-Variate Gaussian Processes with Structured Kernels for Multi-Step-Ahead Driving Behavior Prediction | 101 |
| <i>Seiya Takano, Tomohiko Jimbo</i> | |
| Low-Rank Approximated Kalman Filter Using Oja's Principal Component Flow for Discrete-Time Linear Systems | 109 |
| <i>Daiki Tsuzuki, Kentaro Ohki</i> | |
| Adaptive Q-Learning Based Control for Discrete-Time Linear Quadratic Problem Under Stochastic Disturbances | 115 |
| <i>Vina Putri Virgiani, Shiro Masuda</i> | |
| Design of Dynamic Quantizer Directly from Input-Output Data | 121 |
| <i>Yusuke Fujimoto, Yuki Minami</i> | |
| Multifocal Output of Ultrasound Phased Array by Unconstrained Optimization on Manifold | 126 |
| <i>Masahiro Fujiwara</i> | |
| Estimation of Position, Orientation, and Phase Offset for Ultrasonic Phased Array | 130 |
| <i>Kohei Asai, Atsushi Matsubayashi, Shun Suzuki, Yasutoshi Makino, Hiroyuki Shinoda</i> | |
| Development and Performance Evaluation of an Optical Tactile Sensor Using Transparent Flexible Resin..... | 136 |
| <i>Masami Yukihira, Masanori Goka</i> | |
| Capacitance Manometer Circuit for the Sapphire Capacitance Diaphragm Gauge Separated Model Model V8 Enabling Faster Response | 142 |
| <i>Jun Ichihara, Yasuhide Yoshikawa</i> | |
| Development of the International Standard for Industrial Facility Energy Management Systems (FEMS), IEC 63376..... | 148 |
| <i>Tomoyuki Ikeyama, Kazuo Sueyoshi, Michihisa Suzuki, Sei Sasaki, Tetsuro Matsui, Takuya Watanabe, Ken'Ichi Kamada, Lee Peoy Ying, Yoshiharu Amano</i> | |
| Can ChatGPT Pass Classical Control Theory Exam?..... | 154 |
| <i>Itsuki Ogo, Masanobu Koga</i> | |
| Development of International Standard for Assessing Energy Management Progress for Organizations, ISO TS 50011 | 160 |
| <i>Tomoyuki Ikeyama, Kazuo Sueyoshi, Tetsuro Matsui, Nobuyuki Sato</i> | |
| Low-Impact Cybersecurity Enabling Method for Existing Industrial Control Networks..... | 166 |
| <i>Junya Fujita, Noritaka Matsumoto</i> | |
| Distributed Receding Horizon Consensus Estimation and Model Predictive Consensus Control Via the Alternating Direction Method of Multipliers | 172 |
| <i>Yusuke Kaizu, Hiroyuki Ichihara</i> | |

| | |
|---|-----|
| 3D Measurement in Surround of UAV Using Four Omni-Directional Cameras | 178 |
| <i>Hiroyuki Ukida, Toshiya Tamura</i> | |
| Detecting ~10 mK Face Temperature Change Based on Lock-In Thermography Referencing Heartbeat | 184 |
| <i>Nanami Kotani, Yasuaki Monnai</i> | |
| Deep Learning Solution for Temporal Super Resolution Using Correlation Image Sensor | 190 |
| <i>Pan Wang, Toru Kurihara</i> | |
| LPF-Induced Mixup for Green Pepper Segmentation in Hyperspectral Images | 195 |
| <i>Yuzhou Jin, Yu Jun, Toru Kurihara</i> | |
| Mask R-CNN for Green Fruit Detection with 4-Channel Input Using Color and Thermal Images | 201 |
| <i>Ami Oozono, Toru Kurihara</i> | |
| Remotely Estimating Strategy for Direction of Emitting Source of Gaseous Substance Using Angular Scanning of Ultrasound-Driven Straight Airflow | 207 |
| <i>Taihei Suda, Masaya Takasaki, Keisuke Hasegawa</i> | |
| Towards Building a Next-Generation Data Analytics Toolbox: Application of the Axiomatic Theories Fusion Methodology..... | 213 |
| <i>Fatima-Zahra Abou Eddahab-Burke</i> | |
| Ship Performance Analysis of Automatic Avoidance in Oceangoing | 219 |
| <i>Yurie Hirai, Hideto Kashiwagi, Tadatsugi Okazaki</i> | |
| Optimized Scheduling Decision and Control System for Edible Oil Pipeline Based on Path Planning Algorithm | 225 |
| <i>Yu-Jun Lin, Chin-Sheng Chen, Li-Yeh Chen</i> | |
| Toward a Safe Steering of Personal Vehicle with Intention Detection System Using Mixed Reality and Steady State Visual Evoked Potentials..... | 231 |
| <i>Chihiro Mori, Kouta Okuzono, Nobutomo Matsunaga</i> | |
| Augmenting Sensory Attenuation Via Feedback Control: Innovations in Neuropsychiatric Rehabilitation | 237 |
| <i>Atsuo Nuruki, Aki Takenaka, Takuto Miyazono, Hikaru Nuruki</i> | |
| Proposal of a Stress Evaluation Method Using a Tactile Sensor Sheet on a Bed | 243 |
| <i>Ryuki Otaki, Toshiharu Mukai</i> | |
| Effect of Direction, Frequency, and Amplitude of Visual Stimuli on Human Postural Control | 248 |
| <i>Tomoya Kato, Wen Liang Yeoh, Nobuhiko Yamaguchi, Hiroshi Okumura, Osamu Fukuda</i> | |
| Development of the Force Feedback Algorithm of 2-Peg-in-Hole for Remote Maintenance System for the Fusion Device | 254 |
| <i>Soichiro Kodama, Shota Ogawa, Tomoyuki Ito, Yuto Noguchi, Nobukazu Takeda</i> | |
| Dense-Objects Manipulation by Using a Unit-Typed Prediction Model of Distribution Transition | 260 |
| <i>Yu Takai, Mitsuru Higashimori</i> | |
| Real-Time Adaptation of Drone Altitude and Object Detection Model for Moving Target Tracking | 267 |
| <i>Muhammad Hanif, Takeshi Hatanaka</i> | |

| | |
|--|-----|
| System Modeling Considering Situation and Environment for Action Control Including Awareness and Planning | 273 |
| <i>Masakazu Suzuki</i> | |
| Combinatorial Optimization Method Using Decision Transformer | 281 |
| <i>Hitoshi Ilma, Yoshiyuki Nakamura</i> | |
| A Minecraft Agent Based on Hierarchical Deep Reinforcement Learning Model | 287 |
| <i>Kunikazu Kobayashi, Fumiya Kishi</i> | |
| Automatic Recognition of Wild Boar Using Deep Learning..... | 293 |
| <i>Ryunosuke Niimoto, Francis Besala Ifaso, Jae Hoon Lee, Shingo Okamoto</i> | |
| Potentials of Learning Entropy for Sub-Nyquist and Sub-Noise Anomaly Detection..... | 297 |
| <i>Ivo Bukovsky, Witold Kinsner, Katerina Marzova, Noriyasu Homma</i> | |
| Feasibility Study on LGVF for Spacecraft Formation Flight Mission | 304 |
| <i>Dario Ruggiero, Takahiro Ito, Elisa Capello, Yuichi Tsuda</i> | |
| Distributed and Cooperative Exploration for Multiple Targets Using Probabilistic Roadmaps | 310 |
| <i>Honoka Kobayashi, Toru Namerikawa</i> | |
| Delay-Induced Stability-Switching Properties of Linear MAS with Directed Topologies..... | 316 |
| <i>Fausto Francesco Lizzio, Elisa Capello, Yasumasa Fujisaki</i> | |
| Linear Stability Analysis for a Class of Consensus Controls with Time Delays of Cumulative Distribution Type..... | 322 |
| <i>Hirokazu Komatsu, Hiroshi Yokota, Futa Sato, Hiroyuki Nakajima</i> | |
| A Tunable Extremum Seeking Scheme Using Gradient Sign Estimator with Recursive Least Squares and Delay Compensator..... | 328 |
| <i>Osamu Yamanaka, Yuta Onishi, Lichen Ding, Yuki Nishimuro</i> | |
| Coordinated Guidance Strategy for a Fixed-Distance-Separated Two-Agent System..... | 336 |
| <i>Vivek A, Satadal Ghosh</i> | |
| Ship Control of Unberthing Maneuver Using a Sequential Estimation Model | 342 |
| <i>Hideto Kashiwagi, Tadatsugi Okazaki</i> | |
| Nonsingular Fast Terminal Sliding Mode Attitude Control Design for a Coaxial Tilt-Rotor UAV | 348 |
| <i>Zheng Hou, Longlong Chen, Zongyang Lv, Yuhu Wu, Huijuan Song, Man Wang</i> | |
| Autonomous Flight Control on a Small Flapping Wing Robot Equipped with IMU Sensor..... | 354 |
| <i>Jiraphat Jiraborvornpongsa, Hiroshi Ohtake</i> | |
| Experimental Study on Hybrid Position/Force Teaching and Playback Methods for Robot Utilizing Parallel Wire-Type Teaching Device | 361 |
| <i>Quang-Trung Chu, Yoshifumi Morita, Masao Sakai</i> | |
| Propulsive Force Estimation of Dolphins by Applying Two-Point Hinged Oscillating Wing Theory for Underwater Robot..... | 366 |
| <i>Kaito Yoshiki, Harukaze Tanaka, Koji Okuto, Takashi Saito, Fumitake Fujii, Masaaki Ikeda</i> | |
| Leader-Following Consensus of Open Multi-Unmanned Aerial Vehicles Systems Under Directed Topology..... | 372 |
| <i>Xiaodong Li, Guanghui Wen, Changyin Sun</i> | |

| | |
|--|-----|
| Tip Impedance Control of a Musculoskeletal-Inspired Robot Based on Direct Sum Decomposition..... | 378 |
| <i>Toshimi Shimizu</i> | |
| Development of Thrust Deflection Mechanism for Controlling Attitude of Inspection Robot | 384 |
| <i>Masaki Naganuma, Tomoyuki Yamaguchi</i> | |
| Proposal of an Integration Policy for Heavy Object Handling Technology in a Radiation Environment for the Fusion Device..... | 390 |
| <i>Shota Ogawa, Takahito Maruyama, Yuto Noguchi, Nobukazu Takeda</i> | |
| Development of a Flexible Magnetic Multi-Arm Robot for Ceiling Inspection | 396 |
| <i>Jer Luen Chien, Shawndy Michael Lee, Mario Josue Perez Cruz, Shaohui Foong, Photchara Ratsamee</i> | |
| Estimate the Delay Between Sensors with a Periodic Disturbance Observer..... | 402 |
| <i>Madoka Murakami, Hisakazu Nakamura</i> | |
| Enhancing System Identification Through Transfer Learning in Gaussian Process Models: Bridging Sim-To-Real and Cross-Environment Applications..... | 408 |
| <i>Jyothisraditya Ramaswamy, Arun K Tangirala</i> | |
| RGBD Sensor Calibration Via Single Ball Throwing | 414 |
| <i>Hirotaka Kurisu, Hisakazu Nakamura</i> | |
| Model Estimation for Multiple Switching Control: Applied to a Nano-Precision Stage..... | 420 |
| <i>Fu-Cheng Wang, Ming-Hsiang Chang, Yan-Teng Chang</i> | |
| Modeling of Crowd Behavior at Pedestrian Roundabouts and Its Evaluation of Effectiveness in Directional Guidance..... | 424 |
| <i>Toshiki Kurihara, Akira Kojima</i> | |
| No-Latency Interleaved Delta-Sigma ADC for Multiple-Sensor Interfacing Circuits | 431 |
| <i>Hiroaki Teshima, Taichiro Kato, Tetsuya Kajita</i> | |
| Effective Feature Extraction from Lung Sounds Using Time-Series Neural Networks | 436 |
| <i>Ryosuke Wakamoto, Shingo Mabu</i> | |
| Utilizing a Classification Tree for Rocky Terrain Detection in 3D Point Clouds for Coastal Erosion Studies | 442 |
| <i>Pasut Insung, Peerapat Supasri, Phattarakorn Limsuwat, Setthanan Thitathanapat, Akkharawoot Takhom, Kasorn Galajit, Surasak Boonkla, Jessada Karnjana</i> | |
| A Further Discussion on Distributed Control System in Seimei Telescope..... | 448 |
| <i>Ichiro Jikuya, Shutaro Higashi, Masaru Kino, Katsuhiko Yamada</i> | |
| Investigation of the Correlation of Image Information Acquired by Operator During Operation of Construction Machinery and Operation Input | 453 |
| <i>Kaoru Obayashi, Yoshiaki Saito, Koichi Osuka</i> | |
| Passive Elimination of Nonlinearity in Autoparametric Vibration Absorber by Magnetic Force..... | 459 |
| <i>Chao Zhang, Hiroshi Yabuno</i> | |
| Model Following Approach for Plant-Input-Mapping Discretization of a Current Regulator for Stepping Motors | 465 |
| <i>Shuya Sawahata, Keisuke Yagi</i> | |

| | |
|---|-----|
| Steel Wall Climbing Robot Using Pneumatic Cylinder and Internally Balanced Magnetic Unit..... | 471 |
| <i>Akihito Matsubasa, Tomoyuki Asanuma, Hajime Kimura</i> | |
| PI Parameter Optimization for Pressure-Based MFC Using Gaussian Mixture Model..... | 479 |
| <i>Takayuki Ueda, Seiji Higuchi, Kotaro Takijiri, Daisuke Hayashi</i> | |
| Design and Implementation of Redundant Configuration of Communication Monitoring System Based on OPC UA..... | 483 |
| <i>Toshiaki Honda, Yuta Sugino, Takashi Hamaguchi</i> | |
| Lagrangian Relaxation of MPC Problems with Control Barrier Function-Based Obstacle Avoidance for Moving Objects..... | 489 |
| <i>Ryosei Miura, Hiroyuki Ichihara</i> | |
| Obstacle Avoidance of Mobile Robots Using Lagrangian Relaxation of Model Predictive Control with Improving Intersample Performance | 495 |
| <i>Fumiya Okazaki, Hiroyuki Ichihara</i> | |
| A Passivity-Based Super-Twisting Controller for Mechanical Port-Hamiltonian Systems | 501 |
| <i>Kohei Masutani, Naoki Sakata, Kenji Fujimoto, Ichiro Maruta</i> | |
| A Numerical Method for Scaled H_∞ Control Problems Based on Approximation of Inverse of Positive Definite Matrix | 507 |
| <i>Kento Yoshikami, Noboru Sebe</i> | |
| A Design of H_∞ Controllers Achieving Type 2 Sensitivity Characteristics in Type 1 Servo Systems | 513 |
| <i>Reiji Kawakami, Kana Shikada, Noboru Sebe, Masayuki Sato</i> | |
| Estimation of Scheduling Parameters by Disturbance Observer | 520 |
| <i>Kotaro Kamewari, Kana Shikada, Noboru Sebe, Masayuki Sato, Ikuro Mizumoto</i> | |
| Optimization-Based Scenario Selection for Stochastic Unit Commitment | 526 |
| <i>Yoshihito Kinoshita, Takayuki Ishizaki</i> | |
| Distributed Robust Time-Varying Formation Control of Multi-Agent Systems Under Disturbances | 532 |
| <i>Guang-Ze Yang, Zi-Jiang Yang</i> | |
| Charging Control Method for HEMS Considering Multiple Vehicle Usage Scenarios by Using EV | 538 |
| <i>Yuito Ohno, Shinkichi Inagaki, Takuma Yamaguchi, Akira Ito, Tatsuya Suzuki</i> | |
| Intention Prediction and Joint Action Performance in Asymmetrical Relationships | 544 |
| <i>Hayato Eshita, Wen Liang Yeoh, Nobuhiko Yamaguchi, Hiroshi Okumura, Osamu Fukuda</i> | |
| Change in Arm Movement Due to Weight Addition and Its Effect on Motion Prediction | 550 |
| <i>Chaoshun Xu, Masahiro Fujiwara, Yasutoshi Makino, Hiroyuki Shinoda</i> | |
| Estimation of the Burden Factors of Order Pickers by Bayesian Network: Approach Based on Heart Rate Variability Analysis | 557 |
| <i>Yurika Ono, Aya Ishigaki, Aya Saito</i> | |
| Transfemoral Prosthetic Knee Mechanism with Flexion Restriction Before Stance Phase for Safe Running | 564 |
| <i>Mai Murabayashi, Koh Inoue, Hidenori Ishihara</i> | |
| Perceptual Differences in Compression of Tactile Vibrations and Their Restoration Using Autoencoders..... | 569 |
| <i>Yasutoshi Makino, Shun Terui, Mingxin Zhang, Hiroyuki Shinoda</i> | |

| | |
|--|-----|
| Prediction of Foreign Exchange Rates by a Large Language Model..... | 575 |
| <i>Kexin Peng, Hitoshi Iima, Yoshihiro Kitamura</i> | |
| Enhancing Recommendation Systems: Data Augmentation to Address Incomplete Implicit Feedback..... | 580 |
| <i>Yucheng Shang, Yusuke Goto</i> | |
| Switching Constraint Handling Evolutionary Algorithm for Constrained Multi-Modal Multi-Objective Optimization Problems | 586 |
| <i>Yuhiro Ono, Tomohiro Harada, Yukiya Miura</i> | |
| Effects of Color Constancy Algorithms on Robustness of CNNs to Changes in Illumination Conditions | 592 |
| <i>Akito Morita, Io Yamada, Hirotsugu Okuno</i> | |
| Optimal Task Assignment for Equipment Inspection Robots with Heterogeneous Work Efficiency | 599 |
| <i>Yuya Okada, Hiroki Sugawara, Hiroaki Soya, Takeshi Hatanaka</i> | |
| Enhancing Linear Active Disturbance Rejection Control with Parameter Adaptive Law and Chaotic Mapping-Based PSO Tuning | 605 |
| <i>Guo Wanqi, Tateno Shigeyuki</i> | |
| Angle-Aware Full 3D Coverage Control with ADMM-Based Dynamic Assignment of Charging Stations | 611 |
| <i>Zhiyuan Lu, Muhammad Hanif, Takeshi Hatanaka</i> | |
| Discrete-Time Calculation Methods for Fractional Calculus Using Delta Operator and Matrices..... | 617 |
| <i>Kaiya Iwaki, Shin Kawai, Triet Nguyen-Van</i> | |
| Improvement of Estimation Performance for Angular Velocity of BLDC Motors Based on Hall Sensor Signals at Low-Speed Rotation..... | 623 |
| <i>Naoto Muto, Yuichi Chida, Masaya Tanemura, Katsutoshi Mizoguchi, Kazuteru Suzuki</i> | |
| Parameter Identification for Industrial Robots with a Condition Number Approach | 628 |
| <i>Ya-Yun Hsiao, Chun-Chieh Chan</i> | |
| SVD-Based Recursive PI-MOESP Identification Algorithm with Fixed Input-output Data Size Using Divided-type Matrix Inversion Lemma..... | 634 |
| <i>Ryota Numata, Tsuyoshi Kiyama</i> | |
| Exploratory Data Generation for Non-Linear System Identification..... | 640 |
| <i>Alexander Mario Kopp, Christoph Ament</i> | |
| A Verification and Validation for Scaled Sloshing and Visual Feedback..... | 646 |
| <i>Ryota Kasei, Shunsaku Hamachi, Satoru Sakai, Yushiro Hayakawa</i> | |
| High-Speed Spin Measurement Method for Dotted Table Tennis Ball Using Structured Light of M-Sequence Flickering Pattern | 651 |
| <i>Tomohiro Sueishi, Himari Tochioka, Masatoshi Ishikawa</i> | |
| A Neuro-Inspired Image Sensor System with a Hierarchical Multi-scale Gabor Filtering Circuit | 657 |
| <i>Shutaro Kubo, Yuki Yamaji, Hirotsugu Okuno</i> | |
| Posture Control Problem of One-Link Torque Unit Manipulator – Application of Reaction Wheel with Air Resistance..... | 665 |
| <i>Ryota Hayashi, Yasuyuki Setoyama, Tetsuya Kinugasa, Koji Yoshida, Koichi Osuka</i> | |

| | |
|--|-----|
| Application of Basic Passive Dynamic Control Having High Safety to Pneumatic Artificial Muscle Manipulators..... | 670 |
| <i>Yasuhiro Minamiyama, Nanami Kido, Takanori Kiyota</i> | |
| Some Implications of Positivity with Interior Equilibria Via Asymmetrically Scaled Sectorial Supply Rates..... | 676 |
| <i>Hiroshi Ito</i> | |
| Global Path Following Control of Electric Wheelchair by Virtual Input Assignment on Étale Space | 682 |
| <i>Kohta Mizuno, Hisakazu Nakamura</i> | |
| The Design of Human-Assist Control Using Zeroing Control Barrier Function Outside of Viability Kernel..... | 688 |
| <i>Sosuke Sugimoto, Issei Tezuka, Hisakazu Nakamura</i> | |
| Designing Machine Agents from Gameplay Data to Simulate Humans' Strategies in Social Dilemma Situation..... | 694 |
| <i>Kaito Ikeda, Kengo Suzuki, Takeshi Shibuya, Kiyokazu Ujiie, Susumu Ohnuma</i> | |
| Development of a Navigation Support System Proposing Multiple Avoidance Routes..... | 700 |
| <i>Nonthacha Wongraka, Yurie Hirai, Okazaki Tadatsugi</i> | |
| Automation Surprise Detection Using Facial Expression Recognition and Operation Input Values..... | 706 |
| <i>Tomoki Matsuo, Hiroshi Suzuki, Takahiro Kitajima, Takashi Yasuno</i> | |
| Detecting of Deliberate Responses Due to Social Desirability Bias in Multiple-Choice-Based Personality Tests Using Occipital Lobe EEG Beta Wave Content Rates..... | 712 |
| <i>Yuto Ashikawa, Takashi Ito, Shohei Ishizu, Yosuke Kurihara</i> | |
| Enhanced Object Detection Based on YoloV8+EAC for an Autonomous Vehicle..... | 716 |
| <i>Syam Widjianto, Hsiu-Ming Wu</i> | |
| Robotic Mastication Simulator that Can Reproduce Food Bolus Formation | 722 |
| <i>Yusei Suzuki, Akihide Shibata, Kazuhiro Hori, Mitsuru Higashimori</i> | |
| Real-Time Control of a Human-Following Robotic System Based on Siamese Networks..... | 729 |
| <i>Yu-Tang Huang, Hsiu-Ming Wu, Chuan-Geng Song</i> | |
| A Study of Human Cognitive Activities During Drawing Works..... | 735 |
| <i>Asuka Yoshida, Katsuyoshi Tsujita</i> | |
| Relationship Between VPD, Transpiration Rate and Vapor Conductance for Plants of Different Growth Levels | 741 |
| <i>Renta Noguchi, Asahi Sakuma, Yuko Kakazu, Hiroshi Iwata, Yosuke Asano, Yuichi Itoh, Achyut Sapkota, Atsushi Shiraki, Ikusaburo Kurimoto</i> | |
| Development of a Passive Mechanism for Transfemoral Prosthetic Knee to Assist Sitting-Down on/Stand-Up from a Chair | 747 |
| <i>Shuji Sakoda, Mai Murabayashi, Takuya Mitani, Koh Inoue</i> | |
| Treadmill Speed Control for a Stationary Rehabilitation Trainer..... | 753 |
| <i>Fu-Cheng Wang, Yin Keat Tan, Hsin Ti Cheng, Jia-Wei Chang, Szu-Fu Chen, Ang-Chieh Lin, Lin-Yen Cheng, Tzu-Tung Lin</i> | |
| Development of an Insole Pressure Measurement System for a Deep Learning-Based Human Leg Joint Angle Estimation During Gait | 757 |
| <i>Koyo Toyoshima, Tsige Tadesse Alemayoh, Jae Hoon Lee, Shingo Okamoto</i> | |

Author Index