October 14, 2022 (Friday), Room A

	1A1: Engineering Application of Stochastic Approaches (1) Chair: Kenji Ikeda (Tokushima University)
10:00 [1]	On Birth-Death Processes of Battery Energy Storage Systems Feng-Rung Hu (National Taichung University of Education) Jia-Sheng Hu (National University of Tainan)
10:25 [2]	Stochastic Distributed Microgrid Management with Energy Sharing Provider Shinya Funabiki (Ritsumeikan University) Kiyotsugu Takaba (Ritsumeikan University) Takumi Namba (Ritsumeikan University)
10:50 [3]	A mixed moving average process with its application to CVaR-based engineering optimization Hidekazu Yoshioka (Shimane University) Yumi Yoshioka (Shimane University) Ayumi Hashiguchi (Shimane University) Tomohiro Tanaka (Kyoto University) Futoshi Aranishi (Shimane University)
11:15 [4]	Basic study of circuit performance for parallel connected DC-DC converter with TEM Shota Uchino (National Institute of Technology, Anan College) Nobuyuki Kasa (Okayama University of Science) Takayuki Morioka (Mitsubishi Electric Corporation) Takashi Kato (Sango Co.,Ltd) Hiroyuki Asahara (Okayama University of Science)

	1A2: Engineering Application of Stochastic Approaches (2) Chair: Kiyotsugu Takaba (Ritsumeikan University)
13:00 [1]	Representation and Manipulation of Digital-Ink Using Gaussian Process Regression Jinya Yano (Fukuoka Institute of Technology) Hiroyuki Fujioka (Fukuoka Institute of Technology)
13:25 [2]	Emergency Communication Network Using Disaster Aid Vending Machines Based on α-type Learning Automata Kou Okada (National Institute of Technology, Matsue College) Toru Watanabe (National Institute of Technology, Matsue College) Satoru Kato (National Institute of Technology, Matsue College) Hiroyuki Kamaya (National Institute of Technology, Hachinohe College) Motoshi Hara (National Institute of Technology, Matsue College)
13:50 [3]	Simplified Initial Setting of a Nurse Call System Driven by Eye Movement Using Image Processing Shutaro Ono (Saga University) Takenao Sugi (Saga University) Yoshitaka Matsuda (Saga University) Satoru Goto (Saga University) Naruto Egashira (National Institute of Technology, Kurume College) Ayame Oishi (Minohara Hospital) Takao Yamasaki (Minohara Hospital)
14:15 [4]	A Method of Successive Moving Baseline Estimation of a Slow Speed Robot based on GNSS Positioning Hiroki Hayashi (Ritsumeikan University) Nao Sasamoto (Ritsumeikan University) Yoshiharu Koya (Kobe City College of Technology) Yukihiro Kubo (Ritsumeikan University)

	1A4: Special Lecture Chair: Kenji Sugimoto (Nanzan University)
16:20 (60min)	Randomized Algorithms for Analysis and Synthesis of Uncertain Systems Yasumasa Fujisaki (Osaka University)

1B1: Modeling and Analysis of Stochastic Systems
Chair: Hiroyuki Fujioka (Fukuoka Institute of Technology)

10:00 [1]	Mathematical Modeling for the 5th Wave of COVID-19 in Osaka
	Shuichi Ohno (Osaka Metropolitan University)
	Mikuni Mon (Osaka City University)
10:25 [2]	Analysis of robustness to disturbances of multi-agent system inspired by ant foraging behavior
	Taisei Hayashi (Osaka University)
	Masaki Ogura (Osaka University)
	Naoki Wakamiya (Osaka University)
10:50 [3]	On the Mathematical Analysis of the Stochastic Age-structured Infectious Model
	Masaaki Ishikawa (Yamaguchi University)

1B2: System Identification and Parameter Estimation
Chair: Yuichi Sawada (Kyoto Institute of Technology)

13:00 [1]	Estimation of Bivariate SVAR Systems via Random Perturbations
	Yoji Morita (Kyoto University of Advanced Science)
	Yoshitaka Sawada (Kyoto University of Advanced Science)
	Shigeyoshi Miyagawa (Kyoto University of Advanced Science)
13:25 [2]	Numerical analysis for a first-order discrete model of nonlinear RED
	Kaito Kato (Chukyo University)
	Hiroyuki Asahara (Okayama University of Science)
	Daisuke Ito (Gifu University)
	Takuji Kousaka (Chukyo University)
13:50 [3]	Derivation method of the bifurcation point for one-periodic solution in a forced BVP oscillator with constraint
	Keita Kiyosu (Chukyo University)
	Hiroyuki Asahara (Okayama University of Science)
	Naohiko Inaba (Shonan Institute of Technology)
	Yuu Miino (Naruto University of Education)
	Takuji Kousaka (Chukyo University)
14:15 [4]	Consistent estimate of a residuals covariance for the estimation of noise covariance
	Kenji Ikeda (Tokushima University)
	Hideyuki Tanaka (Hiroshima University)

1B3: Mathematical Finance (1)
Chair & Co-Chair: Kenji Yasutomi (Ritsumeikan University), Masaki Ogura (Osaka University)

15:00 [1]	Impact of factors related to ESG score on Japanese stock returns
	Yuzuki Asaga (Hosei University)
	Kazuhiro Yasuda (Hosei university)
15:25 [2]	Numerical experiments on risk estimation of an endowment insurance using LSM
	Naoya Matsuda (Hosei University)
	Kazuhiro Yasuda (Hosei University)
15:50 [3]	Market Price-Volatility Simulator
	Riki Kitano (Ritsumeikan University)
	Takatoshi Hirano (Ritsumeikan University)
	Jiro Akahori (Ritsumeikan University)

1C1 (Organized Session): Data-Driven Technology and Its Application (1)   Organizer & (Co-)Chairs: Taisuke Kobayashi (NII/SOKENDAI), Hikaru Sasaki (NAIST)

10:00 [1]	Intentional Underestimation at Terminal State in Reinforcement Learning Taisuke Kobayashi (NII/SOKENDAI)
10:25 [2]	Joint Angle Control for Quadruped Robot Using Data-Driven Controller Wataru Imahayashi (Nihon University) Tatsunosuke Ishino (Nihon University)
10:50 [3]	A feature extraction method for anomaly detection of objects from auditory information using autoencoder Rikuto Kawaguchi (NIT, Niihama College) Daisuke Tanaka (NIT, Niihama College)
11:15 [4]	In-bucket Garbage Shape Estimation using Time-varying Gaussian Process Implicit Surface with Proximity Sensor Taichi Taniguchi (Nara Institute of Science and Technology) Hikaru Sasaki (Nara Institute of Science and Technology) Takamitsu Matsubara (Nara Institute of Science and Technology)

1C2 (Organized Session): Data-Driven Technology and Its Application (2)   Organizer & (Co-)Chairs: Taisuke Kobayashi (NII/SOKENDAI), Hikaru Sasaki (NAIST)

13:00 [1]	Online SLAM with Modifications for Mobile Robot Localization Yuta Kurihara (Utsunomiya University) Satoshi Hoshino (Utsunomiya University)
13:25 [2]	Action Modification Based on Real-time Amortized Inference of Others' Intentions Using Backward RNN Yukiko Orui (Keio University) Shingo Murata (Keio University)
13:50 [3]	Bringing Reliability into Mobile Robot Localization Naoki Akai (Nagoya University)
14:15 [4]	Contact motion selection for flexible object opening position estimation by tactile imformation Daisuke Kato (Shizuoka University) Hiraku Yagi (Shizuoka University) Yuichi Kobayashi (Shizuoka University) Noritsugu Miyazawa (Sumitomo Heavy Industries, Ltd) Kosuke Hara (Sumitomo Heavy Industries, Ltd) Dotaro Usui (Sumitomo Heavy Industries, Ltd)

1C3 (Organized Session): Smart Sensing Systems and Its Applications   Organizer & Chair: Tomohiro Umetani (Konan University)

15:00 [1]	Development of Safety Assistance System for Mobility Scooters with Deep Learning-based Recognition –System Design– Bowen Zhang (Konan University) Masahiro Tanaka (Konan University)
15:25 [2]	Construction of outdoor autonomous mobile robot system using open source hardware Seo Takeda (Konan University) Tomohiro Umetani (Konan University)
15:50 [3]	Sliding Innovation Filter for Linear State Equation of Underwater Drones with Modeling Errors Kakeru Fujikura (Nara Institute of Science and Technology) Kenta Hanada (Nara Institute of Science and Technology) Kenji Sugimoto (Nanzan University) Takamitsu Matsubara (Nara Institute of Science and Technology)

October 15, 2022 (Saturday), Room A

2A1: Control of Stochastic Systems Chair: Shuichi Ohno (Osaka Metropolitan University)

10:00 [1]	On Optimal Control of Stochastic Systems for Wasserstein Costs
	Kenta Hoshino (Kyoto University)
10:25 [2]	On almost sure control barrier functions for stochastic systems
	Yuki Nishimura (Kagoshima University)
10:50 [3]	Control of Multi-Robots with Monocular Camera for Chasing a Moving Object Using Pseudo-Measurements
	Kenta Okamoto (Kyoto Institute of Technology)
	Yuichi Sawada (Kyoto Institute of Technology)
11:15 [4]	Nash Linear Quadratic Game by State Feedback for Linear Discrete-Time Markovian Jump Systems
	Gou Nakura (No affiliation)

2A2: Chaos and Fractal Chair: Kenta Hoshino (Kyoto University)

13:40 [1]	Taming chaos in stick-slip vibrations of forced-self-excited mechanical systems with dry friction
	Hideyuki Kato (Oita University)
	Kaito Kato (Chukyo University)
	Shu Karube (National Institute of Technology, Oita College)
	Hiroyuki Asahara (Okayama University of Science)
	Takuji Kousaka (Chukyo University)
14:05 [2]	Experimental Study of a Low Power DC-DC Converter with TEM
	Zeeshan Umer (Okayama University of Science)
	Shota Uchino (National Institute of Technology, Anan College)
	Tsutomu Iida (Tokyo University of Science)
	Hiroyuki Asahara (Okayama University of Science)
14:30 [3]	Piecewise Continuous Maps derived from Parametrically Excited Pendulums
	Takahiro Yamaguchi (Okayama University of Science)
	Hiroyuki Asahara (Okayama University of Science)
	Hirokazu Ohtagaki (Okayama University of Science)
14:55 [4]	Analysis on Transition between Stick-slip State and Slip State in Non-autonomous System with Dry Friction
	Kohki Obata (Chukyo University)
	Kazuaki Hirana (Chukyo University)
	Takuji Kousaka (Chukyo University)
15:20 [5]	Logistic Pure Chaos and Its Application to Electronic Circuit with Non Ohmic Characteristics
	Takaharu Suzuki (Shizuoka Universiry)
	Toru Aoki (Shizuoka University)

2B1: Mathematical Finance (2)
Chair: Takahiro Tsuchiya (The University of Aizu)

10:00 [1]	Efficient numerical computation of the ruin probability Hiroko Soutome (Teikyo University) Naoyuki Ishimura (Chuo University) Hitoshi Imai (Doshisha University)
10:25 [2]	Randominzed Positive-Definite Fourier Estimator Natsuki Toda (Ritsumeikan University) Reika Kambara (Ritsumeikan University) Jiro Akahori (Ritsumeikan University)
10:50 [3]	Optimal Stopping of Ornstein Uhlenbeck Processe Zhi-Jie Jia (Ritsumeikan University) Koji Moritoki (Ritsumeikan University) Jiro Akahori (Ritsumeikan University)
11:15 [4]	Numerical experiments with respect to optimal execution strategies under multiple traders in the Japanese stock market Shunsuke Nakamura (Hosei University) Kazuhiro Yasuda (Hosei University)

2B2: Modeling, Filtering, Control and Analysis of Stochastic Systems and Stochastic Processes
Chair: Satoru Goto (Saga University)

13:40 [1]	An Elementary Study on Stochastic Random Noises and Coordinate Transformations Gou Nakura (No affiliation)
14:05 [2]	Stochastic Shortest Path Problem on Borel Space Considering Cost Distribution Ristusamuel Otsubo (Industrial Research Center of Shiga Prefecture)
14:30 [3]	Solving Hamilton-Jacobi-Bellman Equations via Deep Learning: from a viewpoint of non-linear semigroups and stochastic Hamiltonian systems Mitsuki Haga (Ritsumeikan Univercity) Jiro Akahori (Ritsumeikan Univercity) Shogo Semba (Ritsumeikan Univercity) Nobuto Seo (Ritsumeikan Univercity)
14:55 [4]	Particle Filters and Their Problems Masaya Murata (JAXA)
15:20 [5]	Less Conservative Design of Suboptimal Switching State-estimator over Lossy Networks Toshitaka Aihara (Nara Institute of Science and Technology) Kenji Sugimoto (Nanzan University) Kenta Hanada (Nara Institute of Science and Technology)

2C1: Learning and Optimization
Chair: Takamitsu Matsubara (NAIST)

10:00 [1] Memory Efficient Hessian Vector Products calculation of Neural ODE

Atsuhiro Hada (Osaka University)
Satoru Iwasaki (Osaka University)

10:25 [2] Accelerated Reinforcement Learning with Degeneracy Index for Pursuit Problem

Yu Koyama (National Institute of Technology, Matsue College)
Motoshi Hara (National Institute of Technology, Matsue College)

10:50 [3] Multi-solution tracking in shifting sphere function using gravitational particle swarm algorithm

Shoki Hirose (Utsunomiya University)
Katsutoshi Yoshida (Utsunomiya University)
Yoshikazu Yamanaka (Utsunomiya University)

11:15 [4] Optimal design of two-stage gearbox: an application of multimodal optimization

Satoshi Wakahara (Utsunomiya University)
Katsutoshi Yoshida (Utsunomiya University)
Yoshikazu Yamanaka (Utsunomiya University)

2C2 (Organized Session): Biomedical Data Analysis
Organizer & Chair: Arata Suzuki (Nara Prefectural University)

13:40 [1] A Study of the Change in Selective Attention by Negative Emotion: A Cognitive Reappraisal of Warning Sounds

Kanako Mikami (Kokushikan University)
Kunihiko Oura (Kokushikan University)

14:05 [2] Evaluation Ureteral Stone Fragility using CNN

Daisuke Fujita (University of Hyogo)
Gohara Shinsuke (Ishikawa Hospital)
Hironobu Shibutani (Ishikawa Hospital)
Syoji Kobashi (University of Hyogo)

14:30 [3] Prediction of Upper Ureteral Stone Clearance After Extracorporeal Shock Wave Lithotripsy Using The Mahalanobis Taguchi Method

Takao Umeda (Wakayama University)
Arata Suzuki (Nara Prefectural University)
Hirokazu Miura (Wakayama University)
Ryusuke Deguchi (Wakayama Medical University)
Shimpei Yamashita (Wakayama Medical University)
Isao Hara (Wakayama Medical University)

14:55 [4] Estimating blood pressure fluctuations using BCG

Akiyo Misawa (Wakayama University)
Arata Suzuki (Nara Prefectual University)
Hirokazu Miura (Wakayama University)

15:20 [5] Skin condition evaluation method by imaging photoplethysmography signals

Ryota Nakamoto (Softbank Corporation)
Arata Suzuki (Nara prefectural University)