SSS'10

The 42nd ISCIE International Symposium

on

Stochastic Systems Theory and Its Applications

November 26-27, 2010

40th Year Commemorative Building,

Okayama University of Science, Okayama, JAPAN

November 26 (Friday)

From	To	Room A 22541	Room B 22542
9:50	10:00	**Opening Address** Professor Tohru KATAYAMA	
10:10	11:50	Special Session FS1 **Control and Localization of Moving Robots** Chair: M. Tanaka Cochair: V. Kroumov	Session FB1 **Signal Detection and Statistical Signal Processing** Chair: T.Yasuda
10:10	10:35	Framework of Control and Stabilization System for an Inverted Pendulum Moving Robot M. Wada, M. Tanaka, T. Umetani and M. Ito	Blind Detection of PSK Signals S. Ohno, Y. Jin, T. Kodani and M. Nakamoto
10:35	11:00	Localization of Mobile Client in Multistory Building using Public Wireless LAN System T. Umetani, T. Yamashita and Y. Tamura	Optimal State Estimators for a Class of Discrete-time Linear Systems with Colored Observation Noise Using Improved Recursive Formula Y. Sawada and A. Tanikawa
11:00	11:25	Mobile Robot Localization Using Differential Evolution M. Ito and M. Tanaka	Separation of Each Instrumental Sound in Monaural Music Signals Applying Adaptive Filters with Statistical Least Square Criterion Y. Fukayama, D. Tanaka and T. Kataoka
11:25	11:50	Localization of Moving Robots By Using Omnidirectional Camera in State Space Framework M. Tanaka, T. Umetani, H. Hirano, M. Wada and M. Ito	A Synthetic Approach for Brillouin Optical Time-domain Reflectometry K. Nishiguchi, K. Kishida and L. Che-Hsien
11:50	13:10	Lunch	
13:10	14:50	Session FA2 **System Identification and Parameter Estimation** Chair: S. Goto	Session FB2 **Mathematical Finance 1** Chair: S. Aihara
13:10	13:35	Identification of Partially Unknown System Matrix From Noisy Observation Data via Pseudomeasurement Approach K. Kameyama and A. Ohsumi	Numerical study on a Type I Error of a Random Walk Hypothesis on Interest Rates Nien-Lin Liu
13:35	14:00	Dynamic Sensor Bias Correction for Attitude Estimation using Unscented Kalman Filter in Autonomous Vehicle M. Bando, Y. Kawamata and T. Aoki	The Defaultable Market via HKA T. Tsuchiya and Y. Inoue
14:00	14:25	A Numerical Method for Continuous-Discrete Unscented Kalman Filtering M. Takeno and T. Katayama	Testing for Jumps in Japanese Stock Market under the Financial Crisis through High-frequency Data Y. Barada,Y. Kubo and K. Yasuda
14:25	14:50	Prefiltering based on Wold's Decomposition for Closed-loop System Identification M. Matsubara	Volatility Estimations under the Financial Crisis in the Japanese Market and Testing for Jumps K. Aoki, Y. Barada, M. Tamura and K. Yasuda
14:50	15:00	Coffee	
15:00	16:15	Session FA3 **Fault Detection and Diagnosis / Chaos and Fractal** Chair: M. Wada	Session FB3 **Mathematical Finance 2** Chair: K. Yasuda
15:00	15:25	Stochasticity of Nonlinear Systems of Van der Pol-Mathieu Type T. Yamaguchi and H. Ohtagaki	A Discrete Version of Clark-Ocone Formula and Its Applications in Finance J. Akahori, T. Amaba and K. Okuma
15:25	15:50	A Class of One-dimensional Nonlinear Functions with Multi Return Patterns and with Piecewise Uniform Invariant Density T. Yasuda	Risk-Sensitive Portfolio Optimization and its Applications T. Hayashi
15:50	16:15	On-Line Residual Life Estimation with Outlier Judgement for Condition Based Maintenance S. Goto and K. Tsukamoto	Adaptive Mean-Variance Hedging of Bond Options with Stochastic Risk Term S. Aihara and A. Bagchi
16:30	17:30	**Plenary Lecture** Ito's SDE with Jumps on Positive Half-line and Applications to Mathematical Finance Professor Hiroshi Kunita Chair: Hirokazu Ohtagaki RIDAI Hall, Okayama University of Science	
18:00	20:00	**Banquet** 11th Building, Okayama University of Science	

November 27 (Saturday)

From	To	Room A 22541	Room B 22542
9:00	10:40	Session SA1 **Modeling, Analysis and Control of Stochastic Systems and Stochastic Processes 1** Chair: M. Ishikawa	Session SB1 **Applications in Engineering related to Stochastic Processes and Stochastic Systems 1** Chair: K. Kamejima
9:00	9:25	Optimization of the Observation Gain Matrix for Stationary LQG Control Systems Y. Takeuchi	Method for Improving the Accuracy of Quality Prediction in the Manufacturing Process of S. Chiba, H. Yamanaka and T. Toyoshima
9:25	9:50	Monetary Policy at Zero Interest Bound through Cointegration Analysis Y. Morita and S. Miyagawa	GNSS Positioning Algorithms Applied by Gaussian Sum Filtering Methods Y. Kubo, N. Munetomo, Y. Matsunaga and S. Sugimoto
9:50	10:15	H_∞ Estimation for Linear Continuous-Time Markovian Jump Systems by Game Theoretic Approach G. Nakura	Long Baseline GNSS Relative Positioning with Estimating Ionospheric and Tropospheric Delays and Their Gradients Y. Kubo, H. Tanaka, M. Ohashi and S. Sugimoto
10:15	10:40	H_∞ Estimation for Linear Discrete-Time Markovian Jump Systems by Game Theoretic Approach G. Nakura	Detection of Cycle Slips and Multipath in GNSS RTK-PPP M. Kamimura, Y. Kubo and S. Sugimoto
10:40	10:55	Coffee	
10:55	12:10	Session SA2 **Modeling, Analysis and Control of Stochastic Systems and Stochastic Processes 2** Chair: Y. Takeuchi	Session SB2 **Applications in Engineering related to Stochastic Processes and Stochastic Systems 2** Chair: Y. Fujisaki
10:55	11:20	H_∞ Tracking with Preview for Linear Continuous-Time Markovian Jump Systems by Output Feedback G. Nakura	Collision Detection and Control of Parallel-structured Two-link Flexible Manipulators using Unscented Kalman Filter Y. Sawada, J. Kondo and Y. Watanabe
11:20	11:45	Spatio-temporal Patterns in Stochastic Plankton-fish Systems M. Ishikawa	Toward Stochastic Explanation of Neutrally Stable Delayed Feedback Model of Human Balance Control K. Yoshida
11:45	12:10	Statistical Models and ML Positioning Using Received Signal Powers in Sensor Networks M. Tanikawara, K. Ohba, Y. Kubo and S. Sugimoto	EEG Analysis based on Pulse Complex Model during Hand Motor Imagery H. Uno, T. Yamaguchi, J. Irie, M. Maeda and K. Inoue
12:10	13:10	Lunch	
13:10	14:25	Session SA3 **Pattern Recognition, Computer Vision and 3-D Information Processing** Chair: F. Kojima	Session SB3 **Neural Networks and Fuzzy Systems / Image Processing** Chair:: K. Inoue
13:10	13:35	Talker Identification using Reflection Coefficients K. Eguchi, Y. Mochizuki, M. Taniguchi, K. Nishida and S. Sugimoto	Feedback GMDH-type Neural Network and Its Application to Medical Image Analysis of the Liver Cancer T. Kondo and J. Ueno
13:35	14:00	Shape Description of 3D Objects by Curvature Spin Images Generated via Gaze Modeling T. Nakamae, M. Maeda and K. Inoue	Restoration of Rotational Motion Blurred Images using Inverse Filter T. Morimoto, N. Isoe, Y. Ohizumi, W. Fawwaz Al Maki and S. Sugimoto
14:00	14:25	Multi-Fractal Articulation of Environmental Saliency Arising in Naturally Complex Scenes K. Kamejima	Blur Estimation for Linear Motion Blurred Images N. Yokota, T. Hori, W. Fawwaz Al Maki and S. Sugimoto
14:25	14:40	Coffee	
14:40	15:30	Session SA4 **Time Series Analysis and Spectral Estimation** Chair: J. Akahori	Session SB4 **Stochastic Optimization Methods and Evolutionary Methods** Chair: Y. Morita
14:40	15:05	Inverse Problem for Electromagnetic Propagation in a Dielectric Medium Using Markov Chain Monte Carlo Method F.Kojima	Analysis of Particle Swarm Optimization Algorithms with Multiswarms and Time-Varying Parameters Y. Wakasa, S. Ohno, K. Tanaka and Y. Nishimura
15:05	15:30	Human Motion Analysis based on Hierarchical Decomposition Analysis I. Hanazaki and K. Oura	Expected Squared Estimation Error of Stochastic Approximation in Finite Samples T. Wada and Y. Fujisaki