

East-Asia Inter-University Workshop on Brain Engineering (EAW2010)

March 3-5, 2010

Kyungpook National University, Daegu, Korea

Co-organized by

**Brain Science Research Center, KAIST, Korea
School of Electronics Engineering, College of IT Engineering,
Kyungpook National University, Korea
Dept. of Brain Science and Engineering, Kyushu Institute of
Technology, Japan**

Sponsored by

**Korea-Japan Research Cooperation Program, National Research
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The Institute of Electronic Technology, Kyungpook National
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East-Asia Inter-University Workshop on Brain Engineering

March 3-5, 2010, Kyungpook National University, Daegu, Korea

March 3, 2010 (WED)

18:30~20:30 Welcoming Reception

March 4, 2010 (THU)

08:30~08:50 Registration

08:50~09:00 Opening

Prof. Jin-Ho Cho, College of IT Engineering, Kyungpook National University
Prof. Soo-Young Lee, Department of Electrical Engineering, KAIST

09:00~09:30 Hypothalamo-amygdala-prefrontal Network in Reward Seeking under the Influence of Chemical Environments

Prof. Shuji Aou, Kyushu Institute of Technology, Japan

09:30~10:00 Development of Underwater Robots for Ship Wall Cleaning

Prof. Kazuo Ishii, Kyushu Institute of Technology, Japan

10:00~10:30 Practical Intelligent Pre-processing Employing a Basis Function Network for Human-like Feature Extraction

Prof. Tsutomu Miki, Kyushu Institute of Technology, Japan

10:30~10:50 Coffee Break

10:50~11:20 Nonnegative Matrix Co-Factorizations

Prof. Seungjin Choi, POSTECH, Korea

11:20~11:50 Separation of Desired Speech Based on DUET

Prof. Hyung-Min Park, Sogang University, Korea

11:50~12:20 Beyond Perception, Toward Augmented Cognition based on Visual Attention

Prof. Minho Lee, Kyungpook National University, Korea

12:20~13:30 Lunch

13:30~14:00 Probabilistic Models for Motif Discovery

Dr. Jong Kyoung Kim, POSTECH, Korea

14:00~14:20 Measurement of Travelling-wave Dielectrophoretic Force by Employing Inclined Gravity

Mr. Masanori Eguchi, Kyushu Institute of Technology, Japan

14:20~14:40 A Strategy of Multi-modal Emotion Extraction System using a Heterogeneous Multi-core Processor

Mr. Yoshiki Sato, Kyushu Institute of Technology, Japan

14:40~15:00 An Index Parameter "Power Mass Ratio" to Evaluate Two-mass Jumping System

Mr. Yuya Nishida, Kyushu Institute of Technology, Japan

15:00~15:20 Object Detection with the Arc Segments of the Image Contour

Mr. Wonil Chang, KAIST, Korea

- 15:20~15:40 Learning the Dynamical System Behind Sensory Data
Mr. Jaehyung Lee, KAIST, Korea
- 15:40~16:00 Coffee Break
- 16:00~18:00 Poster Session
- PS-1: Signal Source Localization by using Subthreshold Stimulations in Rat Brain
Dr. Tatsuji Tokiwa, Kyushu Institute of Technology, Japan
- PS-2: Irreversible Blocking of Polar Excitations on Frog Sciatic Nerve Using Semiconductor Pulse Laser Irradiation
Mr. Yuya Hirayama, Kyushu Institute of Technology, Japan
- PS-3: A Motion Detection Model Inspired by CA3-CA2-CA1 Network in the Hippocampus and Its FPGA Implementation
Mr. Haichao Liang, Kyushu Institute of Technology, Japan
- PS-4: Inhibitory Control by the Medial Prefrontal Cortex on Social Learning in Rats
Mr. Akira Masuda, Kyushu Institute of Technology, Japan
- PS-5: Survey of Cooperative Algorithm in RoboCup Middle Size League
Mr. Yuichi Kitazumi, Kyushu Institute of Technology, Japan
- PS-6: Self Localization in Mobile Robot using Self-organizing Template Making
Mr. Atsushi Kanda, Kyushu Institute of Technology, Japan
- PS-7: Learning Dynamics Property of Underwater Robots and Controller Adaptation using mnSOM
Mr. Yasunori Takemura, Kyushu Institute of Technology, Japan
- PS-8: Learning a Visual-to-audio Mapping with Locally Linear Maps on Manifold Structure
Mr. Do Kwan Oh, KAIST, Korea
- PS-9: The Integration Strategies for Audio-visual Speech Recognition using Top-down Selective Attention Model
Ms. Jung-hui Im, KAIST, Korea
- PS-10: Blind Source Extraction Using Closest Constraint
Mr. Jae-Kwon Yoo, KAIST, Korea
- PS-11: Composite Common Spatial Pattern for Subject-to-subject Transfer
Mr. Hyohyeong Kang, POSTECH, Korea
- PS-12: Sub-graph Density and Affinity Propagation for Community Detection
Mr. Yoonseop Kang, POSTECH, Korea
- PS-13: Zero-crossing-based Multi-source Localization in Reverberant Environments
Mr. Min-Wook Kim, Sogang University, Korea
- PS-14: Neuro-robotics Study on Integrative Learning of Visual Attention and Action in Object Manipulation Tasks
Mr. Sungmoon Jeong, Kyungpook National University, Korea
- PS-15: A Modified Incremental (2D)²PCA-RAN-LTM for On-line Learning of Face

Representation and Recognition

Mr. Young-Min Jang, Kyungpook National University, Korea

PS-16: Dynamic Obstacle Identification Based on Global and Local Features for a Driver Assistance System

Mr. Jeong-Woo Woo, Kyungpook National University, Korea

18:30-20:30 Banquet

March 5, 2010 (FRI)

09:00~10:30 Lab & School Tour

09:00~09:30 Prof. Minho Lee (ABR Lab.)

09:30~10:00 Semiconductor Complex

10:00~10:30 Center for Embedded Software Technology

10:30~12:30 Departure from Daegu to Busan Port by bus

12:30~13:30 Lunch