Technical Programs
講演プログラム
Day 1 (Wed, Oct 24th)

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<th>Time</th>
<th>Tutorial 1: Yutaka Matsuo Lab (The University of Tokyo)</th>
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<td>14:00-16:30</td>
<td>Chair: Kenji Doya (Okinawa Institute of Science and Technology)</td>
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<td>T-1: Deep Learning and Intelligence: Neuro-perspective and Recent Trends</td>
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<th>Time</th>
<th>Tutorial 2: Yukiyasu Kamitani (Kyoto University and ATR Computational Neuroscience Lab.)</th>
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<td>17:00-19:00</td>
<td>Chair: Hiromichi Tsukada (Okinawa Institute of Science and Technology)</td>
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<td>T-2: Brain-DNN Homology and its Applications</td>
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<th>Time</th>
<th>Tutorial 3: Tetsuya Ogata (Waseda University and AIST)</th>
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<td>17:00-19:00</td>
<td>Chair: Jun Tani (Okinawa Institute of Science and Technology)</td>
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<td>T-3: Deep Neural Models for Robot Systems based on Predictive Learning</td>
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Day 2 (Thu, Oct 25th)

**10:10-11:10  Keynote Lecture 1: Shun-ichi Amari (RIKEN Center for Brain Science)**
*Chair: Jun Tani (Okinawa Institute of Science and Technology)*
K-1: Statistical Neurodynamics of Deep Networks: Signal Transformations and Fisher Information

**11:10-12:30  Oral Session 1**
*Chair: Tetsuya Ogata (Waseda University)*

**K-1: Statistical Neurodynamics of Deep Networks: Signal Transformations and Fisher Information**

O1-1: Characteristic Whisker Movements Reflect the Internal State of Mice Related to Reward Anticipation
Kota Mizutani (Osaka University, Nagoya University)*; Junpei Ozaki (Nara Institute of Science and Technology); Junichiro Yoshimoto (Nara Institute of Science and Technology); Takayuki Yamashita (Nagoya University)

O1-2: Humans Achieve Bayesian Optimality in Controlling Risk-Return Tradeoff of Coincident Timing Task
Qirui Yao (University of Electro-Communications)*; Yutaka Sakaguchi (University of Electro-Communications)

O1-3: Estimating synaptic connections from parallel spike trains
Ryota Kobayashi (National Institute of Informatics)*; Shuhei Kurita (Kyoto University); Masanori Kitano (Ritsumeikan University); Kenji Mizuseki (Osaka City University); Barry J. Richmond (NIMH/NIH/DHHS); Shigeru Shinomoto (Kyoto University)

O1-4: Explaining Behavioral Data of Visual Material Discrimination with a Neural Network for Natural Image Recognition
Takuya Kounura (NTT Communication Science Laboratories)*; Masataki Sawayama (NTT Communication Science Laboratories); Shin’ya Nishida (NTT Communication Science Laboratories)

**13:30-15:00  Symposium 1: Symbol Emergence in Robotics**
*Chair: Tadahiro Taniguchi (Ritsumeikan University)*

S1-1: Toward cognitive architecture for symbol emergence in robotics: convergence of probabilistic generative models and deep learning
Tadahiro Taniguchi (Organizer, Ritsumeikan Univ.)

S1-2: Neural Models for Linguistic and Behavioral Integration Learning in Robots
Tetsuya Ogata (Waseda Univ. and AIST)

S1-3: Multimodal Categorization via Deep Neural Networks
Takayuki Nagai (The University of Electro-Communications)*; Tatsuya Aoki(The University of Electro-Communications)

**15:20-16:10  Poster Flash talk & 16:10-18:00 Poster session 1**
*Chair: Takashi Sato (NIT, Okinawa College)*

P1-1: Comparison of Network-Level Fluctuations in Modeled and Empirical Human Brain Functional Connectivity
Makoto Fukushima (NICT)*; Olaf Sporns (Indiana University)

P1-2: Leveraging Uncertainty to Robustify Deep Learning Algorithms
Matthew J Holland (Osaka University)*

P1-3: Data Combination for Landslide Detection Using Convolutional Neural Network from Single-polarization SAR Images after Disaster
Ryuta Katsuki (Yamaguchi University)*; Toshikazu Samura (Yamaguchi University)

P1-4: Adaptive Detrying for Accelerating the Training of Convolutional Recurrent Neural Networks
Minju Jung (Korea Advanced Institute of Science and Technology); Jun Tani (Okinawa Institute of Science and Technology)*

P1-5: An Investigation of Incremental Learning as a Temporal Feature Extraction
Shoya Matsumori (Keio University)*; Yuki Abe (Keio University); Masahiko Osawa (Keio University / Dwango AI Laboratory); Michita Imai (Keio University)

P1-6: Multisensory Control: Behavioural and Neural Interactions
Wen Wen (University College London)*; Patrick Haggard (University College London)
P1-7: Improving Exploration in Reinforcement Learning with Temporally Correlated Stochasticity
Dongqi Han (Okinawa Institute of Science and Technology)*

P1-8: Development of a Monkey-Scale Artificial Cerebellum with Online Learning Capability and its simulation on Supercomputer Gyoukou
Wataru Furusho (The University of Electro-Communications)*; Tadashi Yamazaki (The University of Electro-Communications)

P1-9: Looking at Internal Network Representations: An Indicator for Generalization Capability
Anja Philippens (National Institute of Information and Communications Technology (NICT))*; Yukie Nagai (National Institute of Information and Communications Technology)

P1-10: High-Performance Simulation of a Cerebellar Network Model using Monet Simulator on K Computer
Tadashi Yamazaki (The University of Electro-Communications); Hiroshi Yamaura (The University of Electro-Communications)*; Jun Igarashi (RIKEN)

P1-11: Dynamic NOOP Insertion Improves Performance of Pre-trained Deep Reinforcement Learning Model
Takuma Seno (Keio University)*; Masahiko Osawa (Keio University / Dwango AI Laboratory); Michita Imai (Keio University)

P1-12: A Computational Model for Accurate Movements in the Cerebellum
Hiroshi Yamaura (The University of Electro-Communications)*; Tadashi Yamazaki (The University of Electro-Communications)

P1-13: Image Generation from Sound using a Multimodal Feature and GAN
JEONGHYUN LYU (Center for Information and Neural Networks (CiNet), National Institute of Information and Communications Technology (NICT))*; Kaoru Amano (Center for Information and Neural Networks (CiNet), National Institute of Information and Communications Technology (NICT)); Takashi Shinozaki (NICT CiNet)

P1-14: Reservoir Computing with Coupled Stuart-Landau Oscillators
Shouya Nakajima (Future University Hakodate)*; Yuichi Katori (Future University Hakodate/The University of Tokyo)

P1-15: Empirical Mode Decomposition for Improved EEG Signal Classification with Convolutional Neural Network in Brain-Computer Interface Experiments
Kahoko Takahashi (Yokohama City University)*; Zhe Sun (RIKEN Brain Science Institute), Jordi Sol-Casals (University of Vic - Central University of Catalonia); Andrzej Cichocki (Skolkowo Institute of Science and Technology), Anh Huy Phan (Skolkowo Institute of Science and Technology); Ruggero Micheletto (Yokohama City University)

P1-16: Sensitivities of Walking Speed Adjustment and Self-motion Velocity Perception Commonly Decrease for Dense Optic Flow
Shinya Takamuku (NTT communication science labs.)*; Hiroaki Gomi (NTT communication science labs.)

P1-17: An Inquiry into Experience Replay Sampling in Deep Reinforcement Learning
Renzo Tan (Ateneo de Manila University); Nishanth Koganti (Nara Institute of Science and Technology)*; Kazushi Ikeda (Nara Institute of Science and Technology)

P1-18: Computational Modeling of Spontaneous Firing Patterns Generated by Single Autaptic Neurons
Kouhei K Hattori (Waseda University)*; Takeshi Hayakawa (Tohoku University); Akira Nakanishi (Waseda University); Mihoko Ishida (Waseda University); Hideaki Yamamoto (Tohoku University); Ayumi Hirano-Iwata (Tohoku University); Takashi Tanii (Waseda University)

P1-19: Transition between Periodic Orbits and Fixed Points in Dynamic Binary Neural Networks
Yuki Kawamura (Hosei University)*; Syunsuke Aoki (Hosei University); Toshimichi Saito (Hosei University)

P1-20: Initial Constraint on Structure of Recurrent Neural Network for Improvement of Time Series Prediction
Tomohiro Fusauchi (Yamaguchi University)*; Toshikazu Samura (Yamaguchi University)
P1-21: Perception of Synchronization between Music and Body Movements in Radio Calisthenics
Akira Takehana (The University of Electro-Communications)*; Tsukasa Uehara (University of Electro-Communications); Yutaka Sakaguchi (University of Electro-Communications)

P1-22: Simulation Study of Bipedal Locomotion using Motor Modules
Daisuke Ichimura (The University of Electro-Communications)*; Tadashi Yamazaki (The University of Electro-Communications)

P1-23: Temporal Relationship between Music and Body Movement in Radio Calisthenics
Tsukasa Uehara (University of Electro-Communications)*; Akira Takehana (The University of Electro-Communications); Yutaka Sakaguchi (University of Electro-Communications)

P1-24: A Simple Learning Algorithm of 3-Layer Dynamic Binary Neural Networks
Seitaro Koyama (HOSEI University)*; Shunsuke Aoki (HOSEI University); Toshimichi Saito (HOSEI University)

P1-25: A Control Hierarchy Inspired by the Spinal Cord to Exploit Self-Organizing Motion Primitives for Purposeful Trajectory Generation
Benedikt Feldotto (Technical University of Munich)*; Markus Orpana (University of Glasgow); Alois Knoll (Robotics and Embedded Systems)

P1-26: Influence of the moving virtual sound presentation on the auditory Brain-Computer Interface
Yuki Onodera (Nagaoka University of Technology)*; Isao Nambu (Nagaoka University of Technology); Yasuhiro Wada (Nagaoka University of Technology)

P1-27: Decoding the Movement Difficulty from Electroencephalogram before Arm Movements
Tomoki Semoto (Nagaoka University of Technology)*; Isao Nambu (Nagaoka University of Technology); Yasuhiro Wada (Nagaoka University of Technology)

P1-28: Generation of Artificial fNIRS Data using Generative Adversarial Networks
Tomoyuki Nagasawa (Nagaoka University of Technology)*; Takanori Sato (Nagaoka University of Technology); Isao Nambu (Nagaoka University of Technology); Yasuhiro Wada (Nagaoka University of Technology)

P1-29: Convolutional Auto-encoder for Resting-state Functional MRI
Yuki Hashimoto (The University of Tokyo)*; Yuichi Yamashita (National Center of Neurology and Psychiatry)

P1-30: Emulation Learning from Pioneers
Moto Shinriki (Tokyo Denki University)*; Yu Kono (Tokyo Denki University); Tatsushi Takahashi (Tokyo Denki University)

P1-31: Deep Q-network regularized by Adversarial Examples
Wataru Sasaki (Kyoto University)*; Yuji Yasui (Honda R&D Co. Ltd); Kosuke Nakanishi (Honda R&D Co. Ltd) Shin Ishii (Kyoto University)

P1-32: A Hippocampal Model of Rapid Statistical Learning
Masataka Nakayama (Carnegie Mellon University)*; David C. Plaut (Carnegie Mellon University)

P1-33: Exploring Precursors of Parkinson’s Disease by Characterizing Dynamic Postural Balance in Center-of-Pressure Time Series
Takuma Torii (JAIST)*; Shohei Hidaka (JAIST); Tsutomu Fujinami (JAIST)

P1-34: Can Readers Recognize Unit of Summarization for Reading?: An Analysis of Text Segmentation Task
Miho Fuyama (Japan Advanced Institute of Science and Technology)*; Shohei Hidaka(Japan Advanced Institute of Science and Technology)

P1-35: Visualization Method of Data-Sources’ Viewpoint from Datasets Obtained by Various Data-Sources
Hideaki Ishibashi (The Institute of Statistical Mathematics)*
Day 3 (Fri, Oct 26th)

**9:40-10:40 Keynote Lecture 2: Maneesh Sahani (Gatsby Computational Neuroscience Unit, UCL)**
Chair: Kenji Doya (Okinawa Institute of Science and Technology)

- K-2: Computing with distributed distributional codes: convergent inference in brains and machines?  

**11:00-12:00 Oral Session 2**
Chair: Kazushi Ikeda (Nara Institute of Science and Technology)

- O2-1: Visuomotor Associative Learning under the Predictive Coding Framework: a Neuro-robotics Experiment  
  Jungsik Hwang (Okinawa Institute of Science and Technology)*; Jun Tani (Okinawa Institute of Science and Technology Graduate University)

- O2-2: Measuring the Convolution Neural Network similarities trained with different dataset using SVCCA  
  Toya Teramoto (University of Electro-Communications)*; Hayaru Shouno (Graduate School of Informatics and Engineering, The University of Electro-Communications)

- O2-3: Hierarchical Competitive Learning in Convolutional Neural Networks  
  Takashi Shinozaki (NICT CiNet)*

**14:00-15:30 Symposium 2: Whole-Brain Architecture**
Chair: Hiroshi Yamakawa (Dwango)

- S2-1: Strategy to Build Beneficial General-Purpose Intelligence Inspired by Brain  
  Hiroshi Yamakawa (Organizer, Dwango)*; Yutaka Matsuo (The University of Tokyo); Koichi Takahashi (RIKEN QBiC); Naoya Arakawa (The Whole Brain Architecture Initiative)

- S2-2: BriCA Kernel: Cognitive Computing Platform for Large-scale Distributed Memory Environments  
  Kotone Itaya (RIKEN BDR/Keio University/ Dwango/Whole Brain Architecture Initiative)*; Hiroshi Yamakawa (Dwango/Whole Brain Architecture Initiative); Masaru Tomita (Keio University); Koichi Takahashi (RIKEN BDR/ Keio University/ Dwango/Whole Brain Architecture Initiative)

- S2-3: Development of Biologically Inspired Artificial General Intelligence Navigated by Circuits Associated with Tasks  
  Masahiko Osawa (Keio University / Dwango Al Laboratory)*; Kotaro Mizuta (Kyoto University); Hiroshi Yamakawa (Dwango); Yasunori Hayashi (Kyoto University); Michita Imai (Keio University)

- S2-4: Do top-down predictions of time series lead to sparse disentanglement?  
  Kosuke Miyoshi (Dwango Artificial Intelligence Laboratory, narrative nights inc.)*; Naoya Arakawa (The Whole Brain Architecture Initiative); Hiroshi Yamakawa (Dwango)

- S2-5: Visualization of Morphism Tuples of Equivalence Structures  
  Seiya Satoh (National Institute of Advanced Industrial Science and Technology)*; Hiroshi Yamakawa (Dwango)

**15:50-16:40 Poster Flash talk & 16:40-18:40 Poster session 1**
Chair: Ryuta Miyata (University of the Ryukyus)

- P2-1: Unsupervised Area Segmentation of Mouse Auditory Cortex based on Responses to Naturalistic Complex Sounds  
  Hiroki Terashima (NTT Communication Science Laboratories)*; Hiroaki Tsukano (Niigata University); Shigeto Furukawa (NTT Communication Science Laboratories)

- P2-2: Hierarchical Network Model of Auditory Information Processing using Dynamical Predictive Coding and Non-negative Matrix Factorization  
  Kanata Ara (Future University Hakodate)*; Yuichi Katori (Future University Hakodate/The University of Tokyo)

- P2-3: A Virtual Laser Scanning Photostimulation Experiment of the Primary Somatosensory Cortex  
  Zhe Sun (RIKEN)*; Jun Igarashi (RIKEN)
P2-4: MNet: Deep neural network for automatic diagnosis of neurological diseases using raw MEG signals
Jo Aoe (Osaka University)*; Ryoei Fukuma (Osaka University Graduate School of Medicine); Takufumi Yanagisawa* (Osaka University/ Osaka University Graduate School of Medicine/ JST PRESTO); Tatsuya Harada (The University of Tokyo/ RIKEN) *; Masatake Tanaka (Osaka University Graduate School of Medicine); Maki Kobayashi (Osaka University Graduate School of Medicine); You Inoue (Osaka University Graduate School of Medicine); Shota Yamamoto (Osaka University Graduate School of Medicine); Yuichiro Onishi (Osaka University Graduate School of Medicine) Haruhiko Kishima (Osaka University Graduate School of Medicine)

P2-5: Biologically Plausible Learning Method with Minimizing Gap of Local Energy in Asymmetric Neural Network
Futa Tomita (Osaka University)*; Jun-nosuke Teramae (Osaka University); Naoki Wakamiya (Osaka University)

P2-6: Classification based on Neural Connectivity Analysis in a Motor Imaginary Task
Haruo Mizutani (Bond University)*; Irini Giannopulu (Bond University)

P2-7: Improving Analogical Inference Using Vector Operations with Adaptive Weights
Tatsuhiko Kato (Japan Advanced Institute of Science and Technology)*; Shohei Hidaka (Japan Advanced Institute of Science and Technology)

P2-8: A Study on EEG Analysis by the Ordering ICA Algorithm
Yositatsu Matsuda (The University of Tokyo)*; Kazunori Yamaguchi (The University of Tokyo)

P2-9: An Analysis of Human Gaze Data for Autonomous Medical Image Diagnostics
Abdul Rahman Abdul Ghani (The University of Tokyo)*; Nishanth Koganti (Nara Institute of Science and Technology); Ai Nakajima (The University of Tokyo); Nisei Kimura (The University of Tokyo ); patrick radkohl (The University of Tokyo ); Satoshi Iwai (The University of Tokyo ); Yoshimasa Kawazoe (The University of Tokyo ); Ysusuke Iwasawa(); Kotaro Nakayama (The University of Tokyo); Yutaka Matsu (The University of Tokyo)

P2-10: Convolutional Layers Based on Dynamic Neurons
Toshiteru Homma (Yamagata1)*

P2-11: Monkey Features Location Identification using Convolutional Neural Networks
Rollyn Labuguen (Kyushu Institute of Technology)*; Vishal Gaurav (Kyushu Institute of Technology); Salvador Negrete Blanco (Kyushu Institute of Technology); Tomohiro Shibata (Kyushu Institute of Technology); Jumpei Matsumoto (University of Toyama); Kenichi Inoue (Kyoto University)

P2-12: Generating Goal-directed Visuomotor Plans with Supervised Learning using a Predictive Coding Deep Visuomotor Recurrent Neural Network
Takuzumi Matsumoto (Okinawa Institute of Science and Technology)*; Minkyu Choi (Okinawa Institute of Science and Technology); Minju Jung (Korea Advanced Institute of Science and Technology); Jun Tani (Okinawa Institute of Science and Technology Graduate University)

P2-13: Inactivation of the Isthmo-Optic Neurons Impairs Visuomotor Transformation for Proper Target Orienting
Hiroyuki Uchiyama (Kagoshima University)*; Hiroshi Ohno (Kagoshima University); Takuto Kawasaki (Kagoshima University); Yuhi Ohwata (Kagoshima University); Takahiro Narimatsu (Kagoshima University); Yusaku Miyana (Kagoshima University)

P2-14: Restriction of Cerebral Cortical Surface Size by Geometry-Induced Splitting of Traveling Wave Front
Kazuya Horibe (Osaka University)*; Ken-ichi Hironaka (University of Tokyo); Katsuyoshi Matsushita (Osaka University); Koichi Fujimoto (Osaka University)

P2-15: Detection of Task-Relevant and Task-Irrelevant Motion Sequences: Application to Motor Adaptation in Whole-Body Movements
Ken Takiyama (Tokyo University of Agriculture and Technology)*; Daisuke Furuki (Tokyo University of Agriculture and Technology)

P2-16: Reinforcement Learning for Visual Attention with Scalable Size of Attentional Field
Yutaro Murata (Osaka University)*; Jun-nosuke Teramae (Kyoto University); Naoki Wakamiya (Osaka University)
P2-17: Validity of the Flat Minima Approach to Understand Generalization of Deep Learning
Tsuyoshi Tatsukawa (Osaka University)*; Jun-nosuke Teramae (Kyoto University); Naoki Wakamiya (Osaka University)

P2-18: Neural Network that Learns Sequential Processing and Predicts by the Context
Seisuke Yanagawa (OptiD)*

P2-19: On the Neuromorphic 3D Devices for Locally-Connected Convolutional Neural Network
Paniti Achararit (Tokyo Institute of Technology)*; Itaru Hida (Hokkaido University); Tetsuya Asai (Hokkaido University); Yuko Hara-Azumi (Tokyo Institute of Technology)

P2-20: A Narrative Analysis Focusing on Personality for Logical Reasoning in Logic
Momoka Fujieda (Kyushu Institute of Technology)*; Hiroaki Wagatsuma (Kyushu Institute of Technology)

P2-21: Decode of Visual Stimulus in Semantic Space based on Electrocorticography Signals
Ryohei Fukuma (Osaka University)*; Takufumi Yanagisawa (Osaka University); Shinji Nishimoto (Center for Information and Neural Networks (CiNet), National Institute of Information and Communications Technology); Masataka Tanaka (Osaka University); Shota Yamamoto (Osaka University); Satoru Oshino (Osaka University); Yukiyasu Kamitani (ATR Computational Neuroscience Laboratories); Haruhiko Kishima (Osaka University)

P2-22: Online Reinforcement Learning Using a Spiking Neuron Network Model of the Basal Ganglia
Hideyuki Yoshimura (The University of Electro-Communications)*; Tadashi Yamazaki (The University of Electro-Communications)

P2-23: How We Treat Logical Rules to Solve Puzzles: A Semantic Web Approach for Bongard Problems
JISHA MANIAMMA (Kyushu Institute of Technology)*; Hiroaki Wagatsuma (Kyushu Institute of Technology)

P2-24: A Hippocampal Spiking Neural Network Model for Path-Dependent Place Cells
Masashi Kawauchi (Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology)*; Kensuke Takada (Kyushu Institute of Technology); Katsumi Tateno (Kyushu Institute of Technology); Takashi Morie (Kyushu Institute of Technology)

P2-25: Neural Implementation and Evolutionary Simulation of Building Hierarchical Structure
Genta Toya (Japan Advanced Institute of Science and Technology)*; Rie Asano (University of Cologne); Takashi Hashimoto (JAIST)

P2-26: Efficient Encoding of Multi-dimensional Time Series Data with Reservoir Computing
Masumi Kaneko (Future University Hakodate)*; Yuichi Katori (Future University Hakodate/The University of Tokyo)

P2-27: Swap Kernel Regression
Masaharu Yamamoto (Chubu University)*; Koichiro Yamauchi (Chubu University)

Jumpei Ono (Vocational School of Digital Arts Sendai)*; Takuya Ito (Iwate Prefectural University); Takashi Ogata (Iwate Prefectural University)

P2-29: Functional Network Analysis of Neural Activities based on Frequency Domain Analysis and Machine Learning
Yoshiyuki Asai (Yamaguchi university)*; Takeshi Abe (Yamaguchi university); Takahide Hayano (Yamaguchi university); Manon Jaquierod (University of Lausanne); Alessandra Lintas (University of Lausanne); Alessandro E. P. Villa (University of Lausanne)

P2-30: A Bergson-Inspired Adaptive Time Constant for the Multiple Timescales Recurrent Neural Network Model
Thomas F Burns* (Okinawa Institute of Science and Technology Graduate University); Fabien C. Y. Benureau (Okinawa Institute of Science and Technology Graduate University); Jun Tani (Okinawa Institute of Science and Technology Graduate University)

P2-31: Noise Robustness and Generalization of Bayesian Neural Networks with Lognormal Synaptic Weights
Thomás Rodrigues Crespo (Osaka University)*; Jun-nosuke Teramae (Kyoto University); Naoki Wakamiya (Osaka University)
P2-32: Parallel Computing of a Cortico-Thalamo-Cerebellar Circuit on K Computer
Jun Igarashi (RIKEN)*; Hiroshi Yamaura (The University of Electro-Communications); Tadashi Yamazaki (The University of Electro-Communications)

P2-33: Application Log Analysis of Junior High School Math Learning in Okinawa
Kosuke Nakamura (University of the Ryukyus)*; Ryusei Furuta (University of the Ryukyus); Tsukasa Irei (University of the Ryukyus); Hiroyuki Matsuo (University of the Ryukyus); Takanori Hinokuma (University of the Ryukyus); Ryota Miyata (University of the Ryukyus);

P2-34: Learning Timescales in MTRNNs
Fabien C. Y. Benureau (Okinawa Institute of Science and Technology Graduate University); Jun Tani (Okinawa Institute of Science and Technology Graduate University)*

P2-35: Analysis of Structure-Function Relationship using a Whole-Brain Model based on the Common Marmoset MRI Data
Hiromichi Tsukada (Okinawa Institute of Science and Technology Graduate University)*; Hiroaki Hamada (Okinawa Institute of Science and Technology Graduate University); Ken Nakae (Kyoto University); Shin Ishii (Kyoto University); Junichi Hata (Keio University School of Medicine); Hideyuki Okano (Keio University School of Medicine); Kenji Doya (Okinawa Institute of Science and Technology)

P2-36: Theoretical Analysis of Non-Exact Retrace Algorithm
Tadashi Kozuno (Okinawa Institute of Science and Technology)*; Kenji Doya (Okinawa Institute of Science and Technology)
Day 4 (Sat, Oct 27th)

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<th>09:00-10:00</th>
<th>Oral Session 3</th>
<th>Chair: Jun-nosuke Teramae (Kyoto university)</th>
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<td>O3-1:</td>
<td>Observation and Analysis of the Dynamics of the Whole Head Nervous System in C. elegans</td>
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<td>Yuichi Iino (The University of Tokyo)*; Yu Toyoshima (The University of Tokyo); Stephen Wu(The Institute of Statistical Mathematics); Yuishi Iwasaki (Ibaraki University), Ryo Yoshida(The Institute of Statistical Mathematics); Hiroyumi Sato (The University of Tokyo); Moon-Sun Jang (The University of Tokyo); Manami Kanamori (The University of Tokyo); Suzu Oe (Kyushu University), Yuko Murakami (Kyushu University), Takayuki Teramoto (Kyushu University); Takeshi Ishihara (Kyushu University)</td>
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| O3-2:        | Multisensory Integration in the HBP Neurorobotics Platform | P.38 |
|              | Florian Walter (Technical University of Munich)*; Fabrice O. Morin (Technical University of Munich); Alois Knoll (Robotics and Embedded Systems) |

| O3-3:        | Phase Synchrony in Symbolic Communication: Effect of Order of Messaging Bearing Intention | P.40 |
|              | Masayuki Fujiwara (JAIST)*; Takashi Hashimoto (JAIST); Guanhong Li (JAIST); Jiro Okuda (Kyoto Sangyo University); Takeshi Konno (Kanazawa Institute of Technology); Kazuyuki Samejima (Tamagawa University); Junya Morita (Shizuoka University) |

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<th>10:00-11:30</th>
<th>Symposium 3: Studying the Brain from the Viewpoint of Neural Network Learning</th>
<th>Chair: Taro Toyoizumi (RIKEN Center for Brain Science)</th>
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<tr>
<td>S3-1:</td>
<td>An Optimization Approach to Understand Biological Searches and Learning</td>
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<td>Taro Toyoizumi (Organizer, RIKEN Center for Brain Science)*</td>
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| S3-2:        | A Supervised Learning Rule as a Stabilization Mechanism of Arbitral Fixed Points of Hidden Neurons | P.20 |
|              | Jun-nosuke Teramae (Kyoto university)*                                                   |

| S3-3:        | Decoding of Seen and Imagined Contents from the Human Brain via Deep Neural Network Representation | P.21 |
|              | Tomoyasu Horikawa (ATR)*                                                                  |