The 2nd RIKEN AIP – SJTU CS Joint Workshop on Machine Learning and Brain-like Intelligence

Aug 6, 2024 (Day 1)

Time	Talk	Chair
9:30 – 9:40	Opening Remarks by Masashi Sugiyama	
9:40 – 9:50	Introduction of RIKEN-AIP, **Masashi Sugiyama (RIKEN)**	Qibin Zhao
9:50 – 10:00	Introduction of SJTU-CS, **Liqing Zhang (SJTU)**	
10:00 – 10:25	**Masashi Sugiyama (RIKEN)** Recent Advances in Robust Machine Learning	
10:25 – 10:55	Coffee/Tea Break	
10:55 – 11:20	**Liqing Zhang (SJTU)** Tensor Manifold Representation for Multi-Model Visual Tasks	Masashi Sugiyama
11:20 – 11:45	**Qibin Zhao (RIKEN)** Efficient and robust machine learning with tensor networks	
11:45 – 11:55	Group Photo	
12:00 – 13:30	Lunch (all participants)	
13:30 – 13:55	**Baoliang Lu (SJTU)** Multimodal Affective Brain-Computer Interface and Application	Liqing Zhang
13:55 – 14:20	**Tomasz M. RUTKOWSKI (RIKEN)** AI and Aging Brain: Machine Learning for BCI Applications in Healthy Aging and Neurobiomarkers	
14:20 – 14:45	**Lin Gu (RIKEN)** Recognition in a physical world: an evolutionary approach	
14:45 – 16:45	Coffee/Tea Break & Poster Session	
16:45 – 17:10	**Minyi Guo (SJTU)** Cloud Native Architectures	Baoliang Lu
17:10 - 17:35	**Lizhuang Ma (SJTU)** Key Technologies and Applications of Industrial Visual Inspection	
17:35 – 18:00	**Gang Niu (RIKEN)** Generalizing importance weighting to a universal solver for distribution shift problems	
18:00 – 20:00	Dinner & Networking (all paticipants)	

Aug 7, 2024 (Day 2)

Time	Talk	Chair
9:50 – 10:15	**Junchi Yan (SJTU)** Learning for combinatorial optimization and applications	Gang Niu
10:15 – 10:40	**Chao Li (RIKEN)** Toward Exploring Arbitrary Tensor Networks in Computation and Learning	
10:40 – 11:10	Coffee/Tea Break	
11:10 – 11:35	**Yang Yang (SJTU)** Systematic Reduction and Quantitative Assessment of Model Uncertainty in Medical Image Analysis	Tomasz M. RUTKOWSKI
11:35 – 12:00	**Matthias Weissenbacher (RIKEN), Online Talk** Generalisation in image-based Reinforcement learning via Symmetries in Transfomers	
12:00 – 13:30	Lunch (all participants)	
13:30 – 13:55	**Yanmin Qian (SJTU)** Multi-Modal Robust Speech Processing, Analysis and Recognition in Reality	Lin Gu
13:55 – 14:20	**Wei Huang (RIKEN)** Provably Neural Active Learning Succeeds via Prioritizing Perplexing Samples	
14:20 – 14:45	**Yuwei Sun (RIKEN)** Exploring Priors and Long-Term Memory in Transformers	
14:45 – 16:45	Coffee/Tea Break & Poster Session	
16:45 – 17:10	**Weilong Zheng (SJTU)** Rapid Context Inference in a Thalamocortical Model Using Recurrent Neural Network	Junchi Yan
17:10 - 17:35	**Kazusato Oko/Yujin Song (RIKEN)** Transformer Efficiently Learns Low-dimensional Target Functions In-context	
17:35 – 18:00	**Yilan Chen (RIKEN)** Analyzing Neural Networks through Equivalent Kernels	
18:00	Closing Remarks by Liqing Zhang	

Poster session (Aug 6, 2024)

Presenter: Andong Wang
Title: Tensor low-rankness for robust generalization

Presenter: Yuning Qiu
Title: Towards Multi-Mode Outlier Robust Tensor Ring Decomposition

Presenter: Reinmar Kobler
Title: Geometric Deep Learning to advance EEG BCI genearlization and EEG-fMRI fusion

Presenter: Wei Wang
Title: Learning with Complementary Labels Revisited: The Selected-Completely-at-Random Setting Is More Practical

Presenter: Huanjian Zhou
Title: Adaptive compleity of sampling

Poster session (Aug 7, 2024)

Presenter: Takashi Ishida
Title: Is the Performance of My Deep Network Too Good to Be True? A Direct Approach to Estimating the Bayes Error in Binary Classification

Presenter: Simon Kojima
Title: Spatial Auditory Soundscapes for Developing Digital Neurobiomarkers or Cognitive Interventions in Early-onset Dementia Based on EEG and fNIRS Machine-learning Analysis

Presenter: Mingyuan Bai
Title: Diffusion Models for Adversarial Purification

Presenter: Haonan Huang
Title: Adversarially Robust Multi-view Learning: Attack and Defense

Presenter: Hailin Wang
Title: Guaranteed Tensor Recovery fused Low-rankness and Smoothness

Presenter: Guang Lin
Title: Adversarial Training on Purification (AToP): Advancing Both Robustness and Generalization

Oral: 8 (SJTU), 11 (RIKEN), **Poster**: 12 (RIKEN), **Participant only:** 12 (RIKEN)

Venue: Nihonbashi 1-chome Mitsui Building, 15th floor, 1-4-1 Nihonbashi, Chuo-ku, Tokyo