Bayes-Duality 2024 Schedule

June 12

Morning Session (chair: Emtiyaz Khan)

[10:00-10:10] Masashi Sugiyama: Introduction to AIP

[10:10-10:30] Emtiyaz Khan: Logistics

[10:30-11:30] Vincent Fortuin: Use Cases for Bayesian Deep Learning in the Age of Foundation Models Details

[11:30-12:30] Juho Lee: Toward scalable and generalizable Bayesian deep learning Details

[12:30-14:00] Lunch Break (On Your Own)

Afternoon Session (chair: Vincent Fortuin)

[14:00-15:00] Tutorial by Eugene Ndiaye: Conversation on Conformal Prediction Details

[15:00-16:00] Eugene Ndiaye: From Conformal Predictions to Confidence Regions Details

[16:00-16:30] Coffee Break

[16:30-17:30] Alexander Immer: Advances in Bayesian Model Selection for Deep Learning Details

June 13

Morning Session (chair: Alexander Immer)

[10:00-11:00] Haavard Rue: Correcting Approximations using Variational Bayes Details

[11:00-11:30] Coffee Break

[11:30-12:30] Tutorial by Thomas Moellenhoff on Convex Duality Details

[12:30-14:00] Lunch Break (On Your Own)

Afternoon Session (chair: Eugene Ndiaye)

[14:00-16:00] Tutorial by Emtiyaz Khan: Bayesian Learning Rule Details

[16:00-16:30] Coffee Break

[16:30-17:30] Matt Jones: Bayesian Online Natural Gradient (BONG) Details

June 14

Morning Session (chair: Haavard Rue)

[10:00-11:00] Frank Nielsen: Some generalizations of Bregman divergences Details

[11:00-11:30] Coffee Break

[11:30-12:30] Jonghyun Choi: Practical Set-ups and a Method for Continual Learning Details

[12:30-14:00] Lunch Break (On Your Own)

Afternoon Session

[14:00-15:00] Tutorial by Martin Mundt on Continual Learning: Pillars of forgetting in continual updates and the road to lifelong learning Details

[15:00-16:00] Tutorial by Tom Rainforth on Modern Bayesian Experimental Design Details

[16:00-16:30] Coffee Break

[16:30-18:00] Panel I: Uncertainty in AI (moderator: Vincent Fortuin)
Panelists: Juho Lee, Matt Jones, Haavard Rue, Eugene Ndiaye, Alexander Immer, Frank Nielsen, Jonghyun Choi, Srijith PK, Martin Mundt, Tom Rainforth

June 17

Morning Session (chair: Frank Nielsen)

[10:00-11:00] Martin Mundt: Challenging memory as the solution to continual learning Details

[11:00-11:30] Coffee Break

[11:30-12:30] Siddharth Swaroop: Federated learning with a Laplace approximation Details

[12:30-14:00] Lunch Break (On Your Own)

Afternoon Session

[14:00-15:00] Rio Yokota: Application of Bayes Duality to Large Deep Neural Networks Details

[15:00-16:00] Poster Session 1

[16:00-16:30] Coffee Break

[16:30-17:30] Poster Session 2

June 18 (The CREST-talk day)

Morning Session (chair: Martin Mundt)

The day will feature talks with many recent works from the CREST team.

[10:00-11:30] Emtiyaz Khan: How to build transparent and trustworthy AI Details

[10:40-11:00 11:30-12:30] Thomas Möllenhoff + the IVON team Details

[12:30-14:00] Lunch Break (On Your Own)

Afternoon Session (chair: Siddharth Swaroop)

[14:00-16:00] Talks on Memory-Perturbation, Model Merging, and Continual Learning Details

[16:00-16:30] Coffee Break

[16:30-17:30] Panel II: The future of Lifelong Learning (moderator: Martin Mundt)
Panelists: Siddhart Swaroop, Emtiyaz Khan, Thomas Möllenhoff, Hossein Mobahi, Rupam Mahmood, Sarath Chandar, Tom Rainforth, Adam White

[18:00-20:00] Speakers Dinner

[15:00-16:10] Coffee Break

[16:10-17:10] Ehsan Amid: Understanding and Improving Representation and Memory in Deep Neural Networks Details

[17:10-18:40] Panel III: The future of AI (moderator: Emtiyaz Khan)
Panelists: Arindam Banerjee, Yingzhen Li, Daiki Chijiwa, Zelda Mariet, Ehsan Amid, Kennichi Bannai, Razvan Pascanu

June 19

Morning Session (chair: Adam White)

[10:00-11:00] Razvan Pascanu: An optimization perspective on Continual Learning Details

[11:00-11:30] Coffee Break

[11:30-12:30] Rupam Mahmood: Continual Robot Learning Under Computational Constraints Details

[12:30-14:00] Lunch Break (On Your Own)

Afternoon Session (chair: Razvan Pascanu)

[14:00-15:00] Sarath Chandar: Talk TBA Details

[15:00-16:00] Tom Rainforth: Do Bayesian Neural Networks Need To Be Fully Stochastic? Details

[16:00-16:30] Coffee Break

[16:30-17:30] Adam White: Continual Subtask Learning Details

June 20

Morning Session (chair: Adam White)

[10:00-11:00] Tutorial by Hossein Mobahi on Optimization for Deep Learning Details

[11:00-11:30] Coffee Break

[11:30-12:30] Hossein Mobahi: Neglected Hessian component explains mysteries in Sharpness regularization Details

[12:30-14:00] Lunch Break (On Your Own)

Afternoon Session

[14:00-15:00] Arindam Banerjee: Benefits of Structure and Randomness in Deep Learning Details

[15:00-16:00] Poster Session 3

[16:00-16:30] Coffee Break

[16:30-17:30] Poster Session 4

June 21

Morning Session (chair: Zelda Mariet)

[10:00-11:00] Yingzhen Li: Towards Causal Deep Generative Models for Sequential Data Details

[11:00-11:30] Coffee Break

[11:30-12:30] Daiki Chijiwa: Transferring Learning Trajectories of Neural Networks Details

[12:30-14:00] Lunch Break (On Your Own)

Afternoon Session (chair: Yingzhen Li)

[14:00-15:00] Zelda Mariet: A duality perspective on the bias-variance decomposition Details

Posters

Roshni Kamath, TU Darmstadt, The Risk of Getting Confounded in a Continual World

Keigo Nishida, RIKEN ABI Team, Lie-Group Multiplicative BLR with Log-Normal Distribution

Eren Mehmet KIRAL, Keio University, Lie Groups in Bayesian Learning

Thomas Moellenhoff, RIKEN AIP, Variational Learning is Effective for Large Deep Networks

Hugo Monzon RIKEN, AIP ABI Team, Better Exploration of Merged Models via Bayes

Dharmesh Tailor, RIKEN AIP / University of Amsterdam, "Memory Maps of Machine Learning Models" and "The Memory-Perturbation Equation: Understanding Model's Sensitivity to Data"

Tam Le Minh, Inria, France, Multimodal optimization: a variational approach

Yuesong Shen, Technical University of Munich, "What Makes Graph Neural Networks Miscalibrated?" and "Deep Combinatorial Aggregation"

Daniel Augusto de Souza, University College London, Interpretable deep Gaussian processes for geospatial tasks

Rishabh Karnad, Indian Institute of Technology, Hyderabad, Learning Cluster Causal Graphs using Bayesian Inference

Koichi Tojo, RIKEN AIP, mathematical science team, A method to construct exponential families by representation theory