CMAI: Interface of Math and Artificial Intelligence Seminar
The Chinese University of Hong Kong

This CMAI Interface of Math and AI Seminar is organized by Centre for Mathematical Artificial Intelligence (CMAI), under Department of Mathematics at CUHK.

Date: July 11, 2024 (Thursday)
Time: 14:00~15:30 (Hong Kong Time)
Zoom Meeting: 905 330 9693

Learning Partial Correlation based Deep Visual Representation for Image Classification

Speaker: Prof. Lei Wang
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Abstract: Fine-grained image recognition calls for powerful feature representation to characterise the subtle difference across image classes. During the past several years, covariance matrix has been proposed as an effective feature representation for this purpose. This talk will report our recent work on learning generic symmetric positive definite matrices to achieve better image recognition. The first part of this talk embeds the kernel-matrix-based representation into deep neural networks and jointly learns it in an end-to-end manner. The second part of this talk is about learning sparse inverse covariance matrix based deep visual representation. Experimental study is conducted on multiple fine-grained image recognition tasks to demonstrate the efficacy and advantage of the proposed methods.

Bio: Lei Wang received his PhD degree from Nanyang Technological University, Singapore. He is now Professor at School of Computing and Information Technology of University of Wollongong, Australia. His research interests include machine learning, pattern recognition, and computer vision. Lei Wang has published over 200 peer-reviewed papers, including those in highly regarded journals and conferences such as IEEE TPAMI, IJCV, CVPR, ICCV and ECCV, etc. He was awarded the Early Career Researcher Award by Australian Academy of Science and Australian Research Council. He served as Program Co-Chair of ACCV 2022, Senior Area Chair of NeurIPS 2024 and ACMMM 2024, and Area Chair of NeurIPS 2023, CVPR 2024, and ICLR 2024. Lei Wang is a senior member of IEEE.