



Continual Learning: Fundamentals and Advances

In conjunction with **DAI 2023**
DEC 1th, 2023 (13:30 PM - 17:00 PM)
Location: UTC-12, **Singapore**

Organizers



Wenbin Li

Nanjing
University



Yingxia Shao

Beijing University
of Posts and
Telecommunications



Yawen Li

Beijing University
of Posts and
Telecommunications



Hongguang Zhang

Systems
Engineering
Institute, AMS



Rui Yan

Nanjing
University

Our workshop aims to provide a venue where *academic researchers* and *industry practitioners* can come together to discuss the *principles*, *limitations* and *applications* of *Foundation Models in Continual Learning*, and promote the understanding of Foundation Models in *continual learning*, *innovative algorithms*, research on new technologies and applications.

Schedule

Time	Session	Speakers
13:30 - 13:35	Opening Remarks	[Wenbin Li]
13:35 - 14:15	Efficient Continual Learning in Vision	[Mike Zheng, Shou] [Zhangjie Wu]
14:15 - 14:45	Coffee Break	
14:45 - 15:25	Class Incremental Learning, From Backward to Forward Compatible	[Han-Jia Ye]
15:25 - 16:05	Continual Learning on Pretrained Foundation Models	[Zangwei (Alex) Zheng]
16:05 - 16:25	Panel & Closing Remarks	[Rui Yan]

Speakers



Mike Zheng, Shou

Mike Zheng, Shou research focuses on Computer Vision and Deep Learning, with an emphasis on developing intelligent system for video understanding and creation. Mike was awarded Wei Family Private Foundation Fellowship from 2014 to 2017. Mike received the best student paper nomination at the 2017 IEEE Conference on Computer Vision and Pattern Recognition (CVPR'17). His team won the first place in the International Challenge on Activity Recognition (ActivityNet) 2017.



Zhangjie Wu

Zhangjie Wu is a Ph.D. student at Show Lab, National University of Singapore, advised by Prof. Mike Zheng Shou and Prof. Wynne Hsu. He research interests include computer vision and deep learning, focusing on continuous video understanding and generation.

Speakers



Han-Jia Ye

Dr. **Han-Jia Ye** is an Associate Professor in the School of Artificial Intelligence at Nanjing University. His primary research interest is in machine learning, including representation learning, model reuse, and meta-learning. He received his PhD degree in computer science from Nanjing University, China, in 2019. He has served as the tutorial co-chair of SDM'23. Additionally, he is a Senior Program Committee/Program Committee member for top-tier conferences including ICML, NeurIPS, IJCAI, ECML, and others.

Speakers



Zangwei Zheng

Zangwei Zheng (zangwei@u.nus.edu) is a Ph.D. student at National University of Singapore. He is focused on efficient machine learning and optimization. He has received distinguished paper awards on AAI and ACL. His current research mainly focus on Efficient ML (machine learning) and Large-scale DL (Deep Learning) Optimization. Large-scale DL Optimization: optimizer design (faster, memory-efficient, robust, etc.), optimizer explanation, data-model-algorithm connections.

Panel

#1: How do recent trending generative models, such as Stable Diffusion, facilitate or improve continual learning?

#2. In LLM, more data leads to better performance. Is it possible to enable large-scale language models or multimodal models to continuously gain performance improvements from more data without re-training?

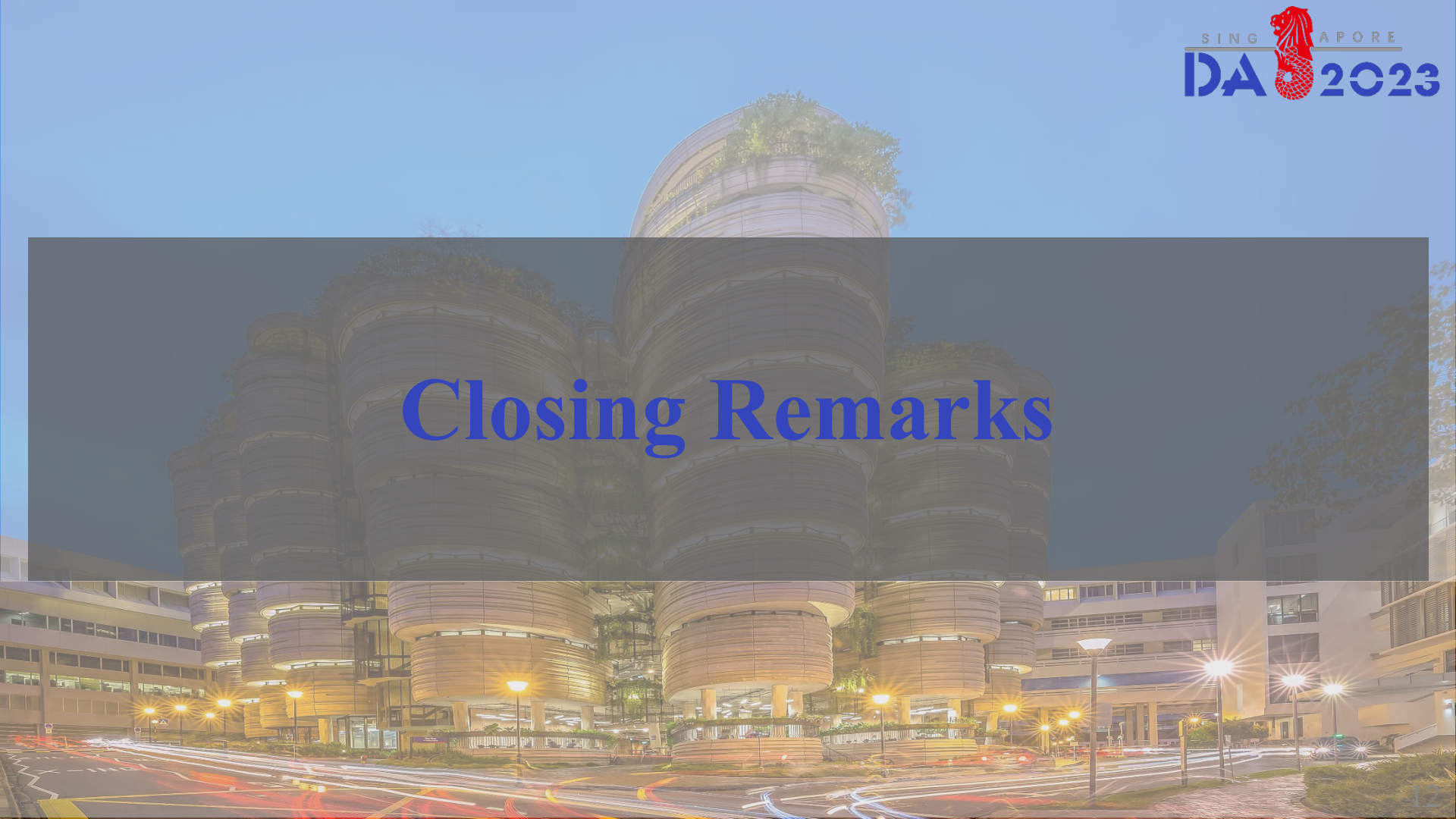
Panel

#3: What are the most exciting trends in continual learning that you think will shape the future of this field, especially in the era of foundation models?

Q & A



Closing Remarks





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