

Mathematical Artificial Intelligence and Applications



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Abstract

Artificial Intelligence is a leading topic in both academia and industry. However, we do not have decent theoretical understanding of the various perspectives of AI, such as the deep learning models, datasets, optimization, and so on. As a matter of fact, we are at the doorstep of the theoretical development of AI. In this talk, we firstly present some challenges of AI from theoretical perspective, and then we introduce the promising mathematical tools to serve the challenges. Finally, we present some existing effort in mathematical AI for communications and computing. We hope and believe the talk will shed light on the promising field for interested audience.

About the Speaker

Prof. Shui YU is a Professor of School of Computer Science, University of Technology Sydney, Australia. His research interest includes Mathematical AI, Cybersecurity, Network Science, and Big Data. He has published seven monographs and edited two books, more than 650 technical papers at different venues, such as IEEE TDSC, TPDS, TC, TIFS, TMC, TKDE, TETC, ToN, and INFOCOM. His current h-index is 86. Prof. Yu promoted the research field of networking for big data since 2013, and his research outputs have been widely adopted by industrial systems, such as Amazon cloud security. He is currently serving the editorial boards of IEEE Communications Surveys and Tutorials (Area Editor), IEEE Transactions on Cognitive Communications and Networking, and IEEE Transactions on Dependable and Secure Computing. He is a Distinguished Visitor of IEEE Computer Society, and an elected member of Board of Governors of IEEE ComSoc. He is a member of ACM and AAAS, and a Fellow of IEEE.