

專 題 演 講

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題 目： 深度強化式學習於電腦遊戲

大 綱：

Deep reinforcement learning (DRL) has made significant progress in various fields, including gaming, robotics, natural language processing, etc. Among these fields, computer games have always been an important field to verify these DRL algorithms. In computer games, the environment is controllable and accessible compared to complex real-world problems. Recently, DRL algorithms such as AlphaGo, AlphaZero, and MuZero have achieved super-human performance on many computer games without using any human knowledge. This talk will first introduce the basic concepts of reinforcement learning. Second, I will review the history of different reinforcement learning algorithms used in computer games. Finally, this talk will also discuss the use of these DRL algorithms in other applications.

簡 歷：

Ti-Rong Wu is currently an assistant research fellow at the Institute of Information Science, Academia Sinica. He received his Ph.D. in Computer Science from National Chiao Tung University in 2020. His research interests include computer games, reinforcement learning, and deep reinforcement learning. He led a group in the CGI lab that developed a computer Go program, named CGI Go Intelligence, which has won many competitions, particularly the second place in the First World AI Go Open in 2017, in which defeated FineArt, developed by Tencent. His research results have also been published in several top-tier conferences and journals, such as AAAI, ICLR, NeurIPS, and IEEE Computational Intelligence Magazine.