

專 題 演 講

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題 目： The Trajectory Tracking and Tactical Analysis for Table Tennis Videos Using Deep Learning Neural Networks

大 綱：

With the prevalence of smart sports, it is common to use artificial intelligence to analyze sports information. In ball sports, the study of using automated systems to detect the trajectory of the ball has also been gradually explored. In this study, we proposed a multi-in and multi-out deep learning trajectory prediction method to predict the trajectory of the ball from the table tennis videos, it not only overcomes the problems of blurring and occlusion of the ball in the image but also improves the computing speed. In bounce calculation, we used the parabolic movement of the ball to judge the bouncing point on the table. In addition, based on the detected ball track coordinates, the distribution of bouncing points, the timing of serving and the speed of hitting the ball are analyzed respectively to provide more data for the coaches and players.

簡 歷：

Jiunn-Lin Wu was born in Kaohsiung city, Taiwan. He received the B.S., M.S. and Ph.D. degree in Electrical Engineering from National Cheng Kung University, Taiwan, in 1993, 1995, 2003 respectively. From 2002 to 2004, he was with the Graphic Division, Ulead systems, Inc., where he was a senior supervisory engineer. Since 2004 he has been with the Department of Computer Science and Engineering at National Chung Hsing University, Taichung, Taiwan, where he is currently a Full Professor. His research interests include deep learning, image processing, machine vision, pattern recognition and signal processing. He is an author/coauthor of more than 30 journals and conference proceedings papers in his research areas.