

# Machine Learning for Dynamical Systems and its Applications

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**Time:** 10:30 am - 11:30 am

**Venue:** B6619 (Blue Zone), 6/F,  
Yeung Kin Man Academic Building (Ac1)

### Abstract

In recent years, machine learning for dynamical systems has become a hot topic in artificial intelligence research. Based by control theory, we propose an approach of machine learning for dynamical systems—Deterministic Learning or Dynamic Learning—which can achieve locally accurate modeling of system dynamics within the neighbourhood of recurrent trajectories generated from nonlinear dynamical systems. This presentation will introduce the deterministic learning method and its applications.

### Biography

Cong Wang received the B.E. and M.E. degrees from the Department of Automatic Control, Beijing University of Aeronautics and Astronautics, Beijing, China, in 1989 and 1997, respectively, and the Ph.D. degree from the Department of Electrical and Computer Engineering, National University of Singapore, Singapore, in 2002. From 2001 to 2004, he was a Postdoctoral Researcher with the Department of Electrical Engineering, City University of Hong Kong. He is currently a Professor with the School of Control Science and Engineering, Shandong University, Jinan, China. He is a recipient of the National Science Foundation of China for Distinguished Young Scholars. His research interests include deterministic learning, dynamical pattern recognition, pattern-based control, and oscillation fault diagnosis. He has published over 100 papers on dynamic learning and co-authored the monograph *Deterministic Learning Theory* (CRC Press, USA).

All are welcome

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