**CAN实验室组会报告**

时间：2015年11月6日下午1:00

地点：物理楼521会议室

报告题目：**Zero-determinant Strategies of Game Theory**

报告人：**荣智海** 教授

报告摘要：

Recently, a new class of probabilistic and conditional strategies, called zero-determinant (ZD) strategies, attracts considerable attention to the two-player repeated prisoner’s dilemma game. A player adopting ZD strategies is able to enforce a linear relationship between his own payoff and the opponent's payoff, in a unilateral way. Moreover, two kinds of ZD strategies, named pinning strategy and extortion strategy, have been carefully investigated. A player using the pinning strategy can independently set his opponent's payoff. A player with the extortion strategy can unilaterally ensure that his surplus is ­χ-times (χ≥ 1) of that of his opponent. The famous tit-for-tat strategy is a fair strategy with χ= 1. Furthermore, recent results show that ZD strategies also exist in a multi-player repeated game, such as the repeated public goods game. The theory of ZD strategies provides a novel viewpoint to depict interactions among players, and it fundamentally changes the research paradigm of the game theory. This talk will review the recent results of ZD strategies in both two-player and multi-player game models.

报告人简介：

Dr. Zhihai Rong obtained his Bachelor and Master degrees from the Harbin Institute of Technology and Ph.D. degree from Shanghai Jiaotong University, all in Control Science and Engineering. Now he is a professor in the Web Sciences Center, School of Computer Science and Engineering, University of Electronic Science and Technology of China. His research interests include complex networks and evolutionary game dynamics. He is the author of over 50 papers in peer reviewed scientific journals and international conferences, including Physical Review E, Europhysics Letters (EPL), New J of Phys., Sci. Rep., Automatica, IEEE Tran. On Cybernetics, ISCAS and IFAC, received more than 600 SCI citations with h-index 12.