Seminar 1

Emotional Multi-Agent Reinforcement Learning in Social Dilemmas

Abstract: Social dilemmas have attracted extensive interest in multi-agent system research in order to study the emergence of cooperative behaviours among selfish agents. This presentation investigates the importance of emotions in modifying agent learning behaviours in order to achieve cooperation in social dilemmas. Two fundamental variables, individual wellbeing and social fairness, are considered in the appraisal of emotions that are used as intrinsic rewards for learning. Experimental results reveal that different structural relationships between the two appraisal variables can lead to distinct agent behaviours, and under certain circumstances, cooperation can be obtained among the agents.

日時：1月8日（木）13:00-14:00
場所：19号館2階202室

Brief CV of Prof Minjie Zhang

Dr Minjie Zhang received her Bachelor of Computer Science degree from Fudan University, China in 1982 and her Ph.D. degree from the University of New England, Australia in 1996. From 1995, she had been employed as an associate lecturer in the University of New England; a lecturer in Edith Cowan University; a lecturer in Newcastle University; and a senior lecturer, then an associate professor in the University of Wollongong. Currently, Dr Minjie Zhang is a full professor and the Director of Intelligent Systems Research Centre at the University Of Wollongong (UOW), Australia. She is a senior member of the IEEE and IEEE Computer Society.

Dr Zhang has edited 9 scholarly books with Springer and 5 special issues with reputable journals. She is the author, or co-author, of over 200 research papers. Dr Zhang is the chief investigator of two Australia Research Council (ARC) Discovery Grants, one ARC Linkage Grant and 1 ARC International Linkage Award. She has been the chair/co-chair of over 20 International conferences/workshops. Her research interests include multi-agent systems and their applications in complex domains, distributed artificial intelligence, smart modeling and simulation in complex systems, data mining and knowledge discovery, service-oriented systems, agent-based grid/cloud computing, and smart grid systems.