

## Robotics and Artificial Intelligence

### Speaker:

Prof. Xie Ming

Nanyang Technological University

mmxie@ntu.edu.sg

### Description:

Robotics and Artificial Intelligence are gaining more and more popularity. This is due to the increasing demand of using robots with self-intelligence to assist people to efficiently perform difficult tasks, or to free people from doing dangerous jobs. As a result, people put a high level of expectations on robots in terms of self-skills and self-intelligence. Therefore, it becomes necessary to tell people honestly what are achievable with today's progress and what will be achievable with future breakthroughs. In this seminar of 2.5 hours, I will go through the following key points underlying robotics and artificial intelligence: what is robot with self-skill and self-intelligence? what is history of robotics and artificial intelligence? what can be done with robots? What are the impacts of robots? how to design robot's body with self-skill? how to design robot's mind with self-intelligence? etc.

### Biodata of Speaker:



Xie Ming received the B.Eng degree in control and automation engineering. Subsequently, as a recipient of the overseas scholarship from Chinese government, he has completed the study for Master degree in the University of Valenciennes (France) as well as the research for PhD degree in the University of Rennes (France). He is Associate Professor of Nanyang Technological University, and was a Fellow with Singapore-MIT Alliance (SMA). He was the General Chair of 2007 International Conference on Climbing and Walking Robots (CLAWAR), the General Chair of 2009 International Conference on Intelligent Robotics and Applications (ICIRA), the Co-founder of the International Journal of Humanoid Robotics (SCI/SCIE indexed), Co-founder of Singapore-China Association for Advancement of Science and Technology, Co-founder of Robotics Society of Singapore. He has taught the courses such as Robotics,

Artificial Intelligence, Applied Machine Vision, Measurement and Sensing Systems, Microprocessor Systems, and University Physics. In terms of scientific research, he has published two books, two edited books, several book chapters, over 10 patents of invention, over 30 research papers in scientific journals and over 100 research papers in international conferences. He was the recipient of one best conference paper award from World Automation Congress, the recipient of one best conference paper award from CLAWAR, the recipient of one outstanding paper award from International Journal of Industrial Robot, the recipient of one Gold Prize (S\$8K) from CrayQuest, the recipient of one Grand Champion Prize (S\$15K) from CrayQuest, the recipient of one A-Star's Best Research Idea Prize (S\$5K), the recipient of one Silver Medal from Dragon Design Foundation.