

# 学术报告会

时间：2016年3月2日(周三)10:00

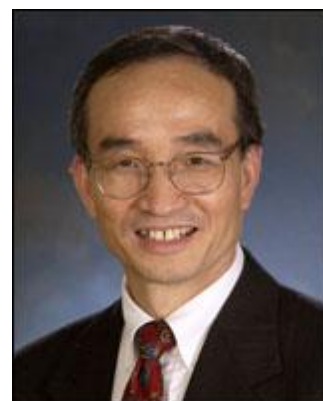
地点：电院群楼2-406会议室

## Why Not Commercialize Your Invention in Robotics?

Prof. Yuan F. Zheng

(郑元芳)

The Ohio State University, USA



### Abstract:

Robotics research, development, and commercialization are booming in recent years due to the rise of manufacturing industries in the world and particularly in China. China now has more than 50% of industrial robots. We researchers in robotics, especially those in China, are responsible for pushing our inventions out of laboratories to benefit the industry and the society as a whole. History has proven that only those elite individuals who have generated marketable robotic products can bring significant impacts to the field of robotics. While industrial robots are mature and dominated by a handful of Japanese and German companies, service robots have a broad scope of applications waiting for robots to conquer. Nevertheless, barrier for both are still high. For industrial robots, the future is in critical robotic components, including motor, speed reducer, and battery. Particularly the first two cost more than 60% of the entire robot. For service robot a simple, reliable, and straightforward “killing” application is the key. The talk further uses speed reducer as an example to illustrate the author’s vision how a rising country such as China to penetrate the market of industrial robots and become competitive. A new concept of motor and speed reducer modularized robotic joint is finally introduced.

### Biography:

**Yuan F. Zheng** received the MS and Ph.D. degrees in Electrical Engineering from The Ohio State University (OSU), in Columbus, Ohio in 1980 and 1984, respectively. His BS degree was received at Tsinghua University in Beijing, China in 1970. From 1984 to 1989, he was with the Department of Electrical and Computer Engineering at Clemson University, in Clemson, South Carolina. In that period, Professor Zheng received the Presidential Young Investigator Award from the U.S. President Ronald Reagan in 1986. Since August 1989, he has been with The Ohio State University (OSU), where he is Winbiger Designated Chair Professor in Electrical and Computer Engineering. Professor Zheng served as the Department Chair at OSU between 1993 and 2004, and was elected to IEEE Fellow in 1997. Professor Zheng served as Dean of the School of Electronic, Information and Electrical Engineering at the Shanghai Jiao Tong University, on the part-time basis, in 2004-2008. Professor Zheng has served IEEE in different capacities for many years including an AdCom member, the Vice President for Technical Affairs of the Robotics and Automation Society, and Program Chairs of IEEE International Conference on Robotics and Automation in 1999 and in 2011, respectively.