

# 学术报告会

时间：2013年12月16日(周一)13:30-15:30

地点：电院群楼2-410会议室

## Robot Based Simulation and Automation

### Approach for Agriculture

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#### Abstract:

The United States Department of Agriculture (USDA) requires that formed meat products should be cooked to a specified minimum internal temperature to eliminate harmful bacteria most notable of which is E Coli. In order to meet this requirement, ready-to-eat meat products are tested on exit from an oven. An Automated Temperature Measurement System (ATMS) was developed to improve the current mode of the testing process of the cooked meat products. The development of the system included three modules—a robotic manipulator (for handling the meat products), a database management system and a process control system. The development of the work cell has been documented through photographs and it has been built to scale to display to interested parties. This presentation will also include research work in the areas of nanomaterials for chemical and biological sensing. These sensors have the potential to be applied to small and large scale robotic systems.

#### Biography:

**Uchechukwu C. Wejinya** received his B.S. and M.S. degrees in Electrical and Computer Engineering from Michigan State University, East Lansing, MI, USA in 2000 and 2002, respectively. He received a Ph.D. in Electrical Engineering in August 2007 from Michigan State University. After completing his Ph.D., he held a post-doctoral research position in the Department of Electrical and Computer Engineering at Michigan State University. In February 2008, he joined the Department of Mechanical Engineering at the University of Arkansas where he holds the rank of assistant professor. Dr. Wejinya's research interests include mechatronics with emphasis on nanotechnology—nanomaterials for nanosensors including biosensors, chemical sensors; nanoelectronics; control systems design and application, robotics, electronics, biomechanics, micro-tools for handling and manufacturing of micro and nano devices, and modeling and simulation of micro and nano structures. Dr. Wejinya holds 2 US patents and is the author of 2 book chapters. He has given more than 10 invited talks nationally and internationally in his young career and has organized multiple sessions (both invited and non-invited) at several international conferences. In 2010, Dr. Wejinya received the prestigious Chinese Academy of Sciences Fellowship for Young International Scientist Award. Dr. Wejinya is a member of IEEE, ASME, and NSBE.