

The Department of Mechanical Engineering/College of Engineering and Applied Sciences  
Stony Brook University

## **Mechanical Engineering Seminar**



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University of Massachusetts Lowell

**Lecture Title: Reverse Engineering: Technology of Reinvention**

Friday, October 21, 2011 11AM, Room 173 Light Engineering

### **Abstract**

During the past decade reverse engineering has increasingly become a common practice utilized by both original equipment manufacturers and aftermarket suppliers. It is also utilized in repairs and accident investigations. This presentation focuses on the application of modern technologies used to decode the design details and manufacturing processes of an existing part in the absence of the original design data. Various measurement instruments, ranging from traditional micrometers to computer-aided laser probes, will be compared for their merits and shortcomings. The statistics of dimensional measurements and the acceptable tolerance of variations will be discussed. It will also discuss the techniques of material identification and manufacturing process verification, and the system compatibility of the subject part to be reverse engineered.

### **Biography**

Dr. Wang was educated at Massachusetts Institute of Technology where he earned his Doctorate of Science. He has been a technical instructor and a researcher in mechanical engineering and materials science for three decades, and a fellow of ASM International. He works for the Federal Aviation Administration, and has been teaching Machine Design at University of Massachusetts Lowell for 15 years as adjunct faculty. Dr. Wang published a book "Reverse Engineering: Technology of Reinvention" in 2010, authored or co-authored over 40 technical/professional articles, and presented lectures/reports at numerous seminars/conferences.