



UNIVERSITY AT BUFFALO

State University of New York



School of Engineering and Applied Science

The Electrical Engineering Department

DEPARTMENT OF ELECTRICAL ENGINEERING

Graduate Seminar Guest Speaker

Dr. Alan H. Cookson

National Institute of Standards and Technology (NIST)

“Research at the NIST Electronics and Electrical Engineering Laboratory”

Friday, December 01, 2006

11:00 AM

Knox 104

ABSTRACT

Founded in 1901, the National Institute of Standards and Technology (NIST) is a non-regulatory federal agency within the U.S. Commerce Department's Technology Administration. The mission of NIST is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life. The research programs support the measurement and calibration infrastructure needed by industry. The talk will outline the impact of NIST, and will in particular focus on the research of the Electronics and Electrical Engineering Laboratory (EEEL). This will include describing programs that use quantum phenomena for fundamental electrical measurements, the electronic kilogram to replace the last remaining artifact, single photon emission and counting, molecular electronics, nanoelectronic and bioelectronic devices, EMC measurements, and research for law enforcement and homeland security.

BIOGRAPHY

Dr. Alan H. Cookson received his B.Sc. and Ph.D. degrees in Electrical Engineering from Queen Mary College, London University. He worked at Westinghouse Electric Corporation, doing research studies on high voltage insulation, directing research and development of high voltage gas-insulated transmission lines with the Power Circuit Breaker Division, and then managing the Advanced Battery and Dielectrics Department at the Westinghouse Science and Technology Center. Dr. Cookson joined NIST in 1992, where he is now the Deputy Director of EEEL. He has over 60 publications and 32 patents, primarily in the areas of ionization in gases, high voltage gas breakdown, and design of high voltage gas-insulated equipment.