

# Winter 2007 SEMINAR SERIES

## F21C Bioprocessing & Biosensing Center

• DIVISION OF FOOD SYSTEMS & BIOENGINEERING •

**PRESENTER:**

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**TITLE:**

**In-situ DNA Synthesis Based on Micro-electromechanical Systems**

**ABSTRACT:**

There exist various commercial techniques for producing DNA probes of pre-synthesized sequences on a chip, but no portable system is yet available to produce any sequence of DNA probes on any spot on a chip on demand. This talk describes various ideas and results that will lead to a novel, flexible in-situ DNA synthesis system based on microelectromechanical systems (MEMS) technology. A packaged self focus acoustic transducer (SFAT) with microfluidic components has been used to eject DNA bases, which have successfully been synthesized on a glass substrate. The successful synthesis along with various successes in the micromachining techniques and the directional ejection by an SFAT ejector demonstrates the feasibility of a portable and compact DNA synthesis system.

**DATE • TIME • LOCATION:**

**Tuesday, May 1, 4:00pm**  
**Ag Eng Bldg 105 • Refreshments**