



# Yale Institute for Nanoscience and Quantum Engineering

**Friday- February 19, 2016**

**12:00 to 1:00 p.m.**

**Engineering Student Center  
Dunham Lab**

Light lunch will be served at 11:45 a.m.

**Professor Daniel Prober**

Department of Applied Physics, Yale University

**" Yale Microfabrication to Nanofabrication –Early Success Stories"**

In the early 1970s, the first clean room at Yale was opened, having modest capabilities. The evolution to producing some of the world's smallest and best nanocircuits is a story of invention, luck and some savvy investment by Yale and funding agencies. The world's smallest wires (at that time) were first produced at Yale in 1978 for transport studies, with widths as small as 20 nm. But, these were produced with optical lithography methods, which are reputed to have a resolution only 10-20x larger. Michael Rooks and colleagues, in the mid-1980s developed the first electron-beam writing system at Yale, and since then those students and researchers, and subsequent ones, have done marvelous things. We describe these early and later developments.

**Michael Rooks**

Associate Director of YINQE, Yale University

**"See What You've Been Missing"**

Learn about the latest additions and improvements to the YINQE lab: new electron microscopes, new AFM modules, improved coaters and more. There are also many other shared facilities at Yale you may not have discovered – including many new instruments being installed on Yale's West Campus. The concept of shared 'core' facilities is now common, but is actually a recent invention. A brief historical view of such facilities will also be presented.

**Host: Professor Eric Altman**