



## **Vertical Single Carbon Nanotube Devices and Arrays**

**Wednesday April 1, 2009**

***Babbio 122, 11 am***

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Newark, New Jersey

There has been a great deal of research and development interest in using single wall carbon nanotubes (SWNT) as device elements for a host of applications. This talk focuses on a novel method to fabricate individual or controlled arrays of interconnected vertically oriented SWNTs using electrophoresis and nanoscopic electrostatic lenses with applications as transistors and single/multiple element biomolecular detectors.

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**Dr. Reginald C. Farrow** is a Research Professor in Physics at NJIT, Newark, N.J., which he joined in 2004. He obtained his Ph.D. in Physics from Steven's Institute of Technology in 1984. He obtained a B.S. in Physics from the University of Rochester in 1973 and a Masters degree from Rutgers University in 1976. Dr. Farrow joined Bell Laboratories in 1976 where he started a career of research science that spanned 25 years. During his tenure at Bell Labs he did research in areas that included fundamental condensed matter physics, materials science, electron microscopy, and nanofabrication. In 2001 he joined Agere Systems in Allentown, PA, where he was the corporate product engineer. In that role he was responsible for technology deployment where he coordinated activities between modeling, design and manufacturing to introduce new technology into the most advanced communications ICs. He provided experimental circuits for verification of new designs and for model loop closure, tracked lot-processing performance at the wafer level, assembled circuits for test, and resolved issues relating to process and reliability. He has published over 60 papers in peer reviewed journals and proceedings, 5 patents, and has given 13 invited talks. Dr. Farrow's main research area at NJIT explores the interface between nanotechnology and biophysics.

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