SCIENCE SEMINAR

Thursday, Sept. 19 - Carson Taylor Hall room 322

T. J. Spence

Doctoral Candidate – Louisiana Tech University

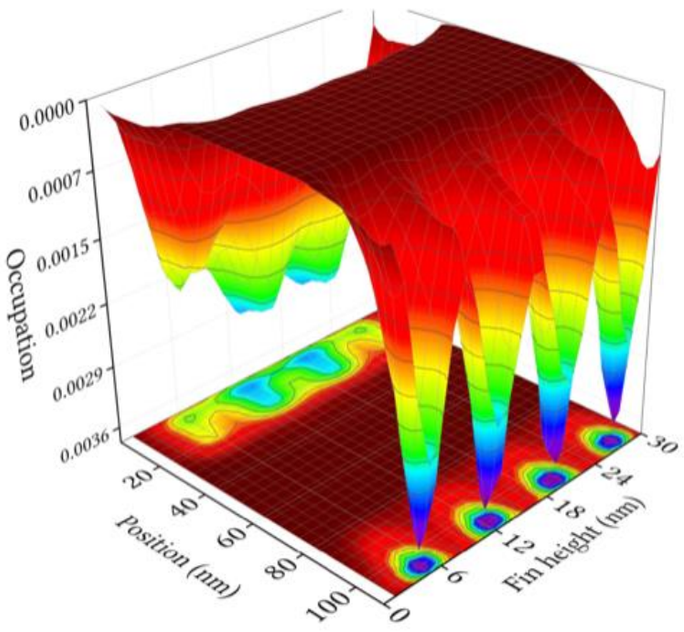

Figure 4.24: Simulated charge density

"Monte Carlo Simulations of Electrothermal Transport in Nanoelectronics"

The field of microelectronics plays an important role in many areas of engineering and science, being ubiquitous in aerospace, industrial manufacturing, biotechnology, and many other fields. The capacity to simulate new devices accurately is critical to the engineering design process, as device engineers use simulations to predict performance characteristics and identify potential issues before fabrication. In this talk, a Monte Carlo technique is presented for solving the classical Boltzmann Transport Equation, Poisson's and Schrödinger's equations for electrons and phonons.

Come at 3:30pm for refreshments, speaker at 4:00pm