

Department of Mathematical and Physical Sciences Presents

The DMPS 2009 Colloquium

Thursday, April 16

5-5:50pm

Room: LBV 208

Free and Open to Public

Mr. Luis Villarreal

M.S. Student in Math and Physical Science Department

Advisor: Dr. Chen-Han Sung

Optoelectronic Properties of Quantum Dots

Abstract

Over the past decades, there have been many advances in material science in pursuit of the development of nano-technology. In particular, such advances in semiconductor physics have greatly impacted the forefront of technology through the research and engineering of quantum dots. We study the modeling of the quantum dot through the Time-Independent Schrodinger Equation and the Infinite Square Well theory. Specifically, the theory, properties, and applications of these nano-scale crystals are introduced and their characteristics are explained. Potential applications of quantum dots include the improvement to light-based devices such as LED's and biological tagging for medical research.

Refreshment Starts at 4:30pm

For additional Information, contact Dr. T. Jin. (tjin@tamiu.edu) or (956)326-2582 (office)