

Seminar in Physics
Friday, March 8
3:30-4:45
Ross 0220

STM: Taking Pictures of Atoms and Applications
Richard Pacheco*

Since the first microscopes were made, people have been using technology to gain a better understanding of the unseen. The universe is full of things so small they cannot be seen without the aid of technology to make them larger. Through use of microscopes the human race has been able to better understand the structure of life, the arrangements of molecules, and even see what atoms look like. The STM is a remarkable microscope that has aided scientists in research on atoms since the 1980s by allowing them to see atoms. This presentation will discuss the STM, how it works, and what it can be used for, as well as what has been done so far at UNC with the STM.

Fundamentals of Superconductivity
Marius Herlea Jr*

Superconductivity is a phenomenon that distinct matter(s) experience when they are exposed to extremely low temperatures (for now). The eventual underlying understanding of superconductors may help in the transformation of our world with its many possible applications. Looking into the depths of matter can give us answers in many fields of science, as well as open our minds to the depths of nature. The short 101 years of discoveries of superconductivity will be discussed as well as the future that it may hold.

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Refreshments

