

SEMINAR IN PHYSICS

FRIDAY, MARCH 14, 2014

3:30-4:25 – Ross 0220

Refreshments

Robots in Space

Tim O'Neill (UNC Physics student)

While sending a robot into space is easier than sending a human, it is still extremely complicated to design a robot that can survive such extreme conditions. This talk will focus on challenges that must be addressed as well as some solutions to these problems. Some examples include energy storage and generation, precise terrain avoidance, self-diagnostics and repair, and long-term data storage and transmission.

A Brief Introduction of Quantum Field Theory

Anthony Saccomanno (UNC Physics student)

Quantum field theory (QFT) is a theoretical framework for constructing quantum mechanical models of subatomic particles. The presentation will give a very brief overview of some of the leading theories that unify forces. Quantum Field Theory will be looked at in particular along with its relation to other unifying theories. A background will be given to introduce the discovery of QFT and some very simple principles behind the theory including Feynman diagrams, superposition, and Lie groups. Novel applications and discoveries will also be discussed.