

# Physics Seminar

Friday, 3:30 pm April 1, 2011

## Swarm Behavior and It's Uses in Research

*Casey Kuhns*

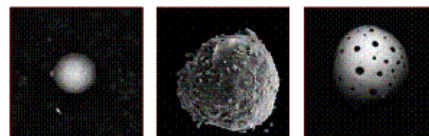
Swarm behavior is demonstrated in nature daily. From flocks of birds, to fashion fads, researchers are trying to understand how swarm behavior develops and how it can be used. All swarm behavior stems from a single unit or “boid” having a limited set of rules to affect its local behavior. This behavior affect the local behavior of its neighboring “boids” to produce a global decision or outcome. Researchers are trying to apply concepts of swarm intelligence to develop new pharmaceuticals, predict stock market trends, and even simply to understand how swarms are manifested in nature.



## Scanning Electron Microscope Analysis of Gunshot Residue on Fabrics

*John Arko*

The Scanning Electron Microscope is used to examine Gunshot residue samples collected off suspects in the field. The suspect's clothing isn't using collected for Scanning Electron Microscope analysis. This research project is examining if it is prudent to collect the suspects clothing as evidence. By saturating clothing with gunshot residue, and collecting samples off that fabric and examining it with the Scanning Electron Microscope.



Location: Ross 0220 (Ground level of Ross Hall)  
(Refreshments will be served at 3:20pm.)

*Physics/EPS/NHS/UNC*