

# Seminar

## Fall 2011



THE UNIVERSITY OF  
SOUTHERN MISSISSIPPI  
SCHOOL OF COMPUTING

**Title:** Advancing the Layered Approach  
to Agent-based Crowd Simulation

**Time & Location:**

2:00pm, Friday, September 2, 2011

Tec 205 (Vislab), Bobby Chain Technology Building

**Presenters:**

Dr. Ahmed Abukmail

School of Computing

The University of Southern Mississippi

**Abstract:** We adapt a scalable layered intelligence technique from the game industry, for agent-based crowd simulation. We extend this approach for planned movements, pursuance of assignable goals, and avoidance of dynamically introduced obstacles/threats, while keeping the system scalable with the number of agents. We exploit parallel processing for expediting the pre-processing step that generates the path-plans offline. We demonstrate the various behaviors in a hall-evacuation scenario, and experimentally establish the scalability of the frame-rates with increasing number of agents.