Dear Faculty, IGERT Fellows, IGERT Associates and Students,

You are cordially invited to attend a IGERT on Video Bioinformatics Seminar presented by:

Hoang Nguyen

Computer Science, UC Riverside

Date: Friday, April 6, 2012
Location: WCH Room 205/206
Time: 11:10am

Zombie Survival Optimization: A Swarm Intelligence Algorithm Inspired By Zombie Foraging

Abstract:

Search optimization algorithms have a constant need to balance between exploration of the search space (e.g., locations on a map, pixels in an image) and exploitation of learned information (e.g., prior knowledge, regions of high fitness). This talk introduces Zombie Survival Optimization (ZSO), a new swarm intelligence algorithm modeled after the hypothetical foraging behavior of zombies. Zombies (exploration agents) are placed in a search space where the underlying fitness space is modeled as a hypothetical airborne antidote which cures a zombie's aliments and temporarily turns them back into humans (who attempt to survive by exploiting the search space). Such an optimization algorithm is useful for search, such as searching an image for a pedestrian. Tracking experiments on the CAVIAR dataset suggest improved efficiency over Particle Swarm Optimization (PSO).