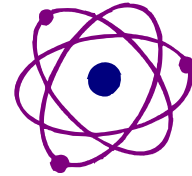


ECEN 5773
Computational Intelligence
Fall 2005
Final Project



Evolutionary Computation Based Novel Applications

Task 1: *Topic of Interest*

Propose a focused research topic to be approved by *October 27, 2005*. Appointment needs to be made with the Instructor to finalize the choice. No redundant topic will be assigned. The topic is given at first come first take basis.

Task 2: *Literature Survey*

Search literature that utilize the evolutionary computation for your research area of interest. Review the chosen set of articles with supported simulation studies and benchmark tests. Provide a list of references reviewed in IEEE style to the Instructor by *November 8, 2005* via an email.

Task 3: *Research & Simulation*

Contemplate novel ideas and conduct necessary research and simulation to substantiate the ideas inspired. Provide the well-thought-out ideas to the Instructor by *November 22, 2005* via an email.

Task 4: *Documentation*

Complete a 6-page report on the chosen subject with elaborated justifications given the following structure (need not to be exactly). Please follow the *IEEE format* specified in the second page. The report is due on *November 29, 2005*. Students with top quality ideas will be requested to work with the Instructor during the holiday break to submit papers to CEC 2006, Vancouver.

title, author and affiliation
abstract/summary
introduction with problem statement and motivations
literature survey with identified deficiencies
proposed novel idea or algorithm developed to remedy/improvement
simulation/experimental validation
conclusions and future research
references

Task 5: *Oral Presentation*

Oral presentation will be scheduled on *December 6 and 8, 2005*. Each one is allowed a 20-minute talk. All students will be involved in grading the presentation for others.

Candidate Application Domains

Control & Decision Making;	Data Mining;	Engineering Design;
Bioinformatics;	Process Optimization;	Finance & Economic;
Mechatronics;	Scheduling;	Layout and Routing;
Optimization;	Chaos;	Machine Vision;
Sensor Fusion;	Data/Model Visualization;	Evolutionary Art;
Evolutionary Music;	Evolvable Hardware; and	Implementation.