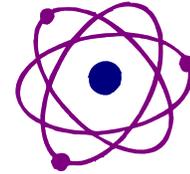


ECEN 5773 Intelligent Systems  
Fall 2003



Midterm Project #1

**Biological Paradigms**

*Team Assignments-*

Team 1: Daghan Acay, Bashar Al-Barrishi, Jeffrey Cohey, Christopher White

- ***Artificial Life***

Team 2: Moayed Daneshyari, Bhaskaran Devaraj, Leopoldo Fonseca

- ***Social & Collective Behaviors***

Team 3: Michel Goldstein, Joseph Hershberger, Mayuresh Kulkarni

- ***Particle Swarm Optimization***

Team 4: HaHarinarayan Iyer, Xun Jin, Tasneem Kanpurwala

- ***Learning Classifier Systems***

Team 5: Zhuo-bin Li, Christopher Matthes, Sai Venu Lolla

- ***Coevolution***

Team 6: Pedro Lima, Todd Parnian, Lalitha Ramaswamy

- ***Artificial Immune Systems***

Team 7: Swakshar Ray, Yoshihiko Saito, Vijay Venkataraman

- ***Evolutionary Games***

Team 8: Sangameswar Venkatraman, Christopher Williams, Weibo Zhang

- ***Cultural Algorithms***

*Task 1 (Individual Task)-*

For the assigned topical area, conduct literature survey independently and each chooses a set of technical publication in relevant, review the paper(s) thoroughly, consult with additional literature as necessary and critic the concept proposed therein. Prepare a 3-5 page document in the following order.

1. Synopsis: summary/overview of the presented research works
2. Contribution: outline the state-of-the-art new ideas proposed therein
3. Deficiencies: outline the problem areas identified
4. Potential Improvement: provide your thought to advance the proposed concept
5. Conclusion: draw relevant conclusions

*Turn in your literature survey and paper critique individually by October 20, 2003*

Resources: IEL, ACM, Web of Sciences, Digital Dissertations, Citeseer

*Task 2 (Team Efforts)-*

Hold team conference(s) to brainstorm the underlying biological paradigm. Divide the job accordingly (for example, further literature survey, algorithm development, simulation validation, benchmark comparison, applications domains, and potential improvements). Integrate all works into a standalone document in 10-15 pages. Prepare for a 20-minute oral presentation on October 28 (Tuesday for teams 1, 2, 3, 5) or 30 (Thursday for teams 4, 6, 7, 8),

2003. Details to be arranged in the class. The report in MS Word format and presentation slides in MS PowerPoint format should be emailed to instructor to compile into a CD-ROM proceedings to be made available at the end of semester.

*Email your conference minutes to instructor immediately after the meeting(s).*

*Email your report and presentation as a team by October 27 or 29, 2003.*

*Task 3 (Team Efforts)-*

Hold team conference(s) to brainstorm a novel computational intelligence paradigm inspired by biological or natural phenomena. Exercise your imagination. Organize your idea/concept in a understandable way. Explain its potential features, promises and possible applications.

Document your findings and imagination by team in 3-5 page. The position paper should be emailed to instructor to be incorporated into the class CD-ROM to be made available at the end of semester.

*Email your conference minutes to instructor immediately after the meeting(s).*

*Email your report as a team by October 24, 2003.*

*Brainstorming session on October 24, 2003.*