GRS CS-697
Computer Science Graduate Initiation
Spring 2008

Fridays 10am-11am
MCS 135

Professor Azer Bestavros   Professor George Kollios
        best@cs.bu.edu   gkollios@cs.bu.edu

MCS 276, 617-353-9726   MCS 288, 617-358-1835
  Tue 5:00pm-6:30pm   Wed 11:00am-12:30pm
  Wed 2:00pm-3:30pm   Thu 2:00pm- 3:30pm

Overview of the Course

This required two-credit course is designed to help guide entering Ph.D. students through the challenging transition into the graduate program in Computer Science. Topics range broadly across issues of research and scholarship. We will attempt to cover as many of these as possible:

- balancing competing demands of coursework, research, and teaching
- how to go about identifying and working with a dissertation advisor
- working within a research group
- becoming a proficient reader, writer, and reviewer of technical papers
- making use of online and library research resources
- becoming proficient with technical tools of the trade for writing and performing research
- presenting good talks
- becoming visible in the research community
- understanding and applying scientific ethics
- applying for fellowships and internships
- writing a thesis proposal and a dissertation
- finding a job after graduate school

The course will not cover details of program requirements and milestones, nor will the class provide academic advice specific to individual students in the class. For these please consult the Graduate Student Handbook and your academic advisor, respectively.

Course Format

Weekly meetings will be led by the instructors, frequently accompanied by other faculty members and senior (or former) Ph.D. students, who will discuss their experiences. Although most weeks will consist of a lecture portion, especially on the more technical

topics, there will be ample time for discussion during each class. We will meet once a week for 60 minutes. We will often expect you to have read something in advance to prepare for class discussion. We will assign the readings as needed.

Grading and Assignments

Letter grades will be assigned. Grades will be based on completion of written assignments and reading assignments for the class, active participation in class, and attendance. The three main assignments in the class will help the student build a foundation in a research area of their choice, and are to be conducted together with, and assessed by, a faculty advisor in a research area that they are interested in pursuing.

1. Written Review (due March 7). In this assignment you will read a paper chosen in concert with the advising faculty member, and generate a conference-style review. Using a review form from a top conference, the review will assess the paper's suitability for publication and offer constructive feedback intended to help the authors improve the paper. A post mortem discussion of the reviews will be conducted in class.

2. Short Talk (due April 11). In this assignment you will present a 20-30 minute talk at a group meeting outside of class. Talks will be previewed and critiqued by an advising faculty member. Appropriate venues include established research group meetings or the graduate student lunch talk series. For this talk you must prepare your own slides | you may not use any slides prepared by others. Presentations will be graded on the ability of the student to incorporate effective presentation techniques discussed in the seminar, and to communicate the main ideas and contributions of the paper effectively and clearly. You may choose to present the paper that you reviewed for the first assignment.

3. Synthesis Paper (due April 25). In this assignment you will write a short "synthesis" paper that connects two or three research papers in a sub-discipline. These papers are again chosen in concert with an advising faculty member. A good synthesis paper briefly summarizes the main ideas in the papers, and then goes on to describe the connections among the papers. It is important to restate ideas in a new way; simply repeating or paraphrasing what the authors wrote is not sufficient. The connections among the papers can be described in terms of how the ideas in the papers complement each other or contradict each other; or the discussion might articulate how the ideas in the papers can be used together to create something more significant than just the \sum of the parts" of the papers. The synthesis paper will be graded by the advising faculty member based on the student's demonstrated understanding of the papers, the student's ability to demonstrate originality, and the overall quality and clarity of the writing.

Web Site

The course has a web site where assigned and recommended readings will appear:
http://www.cs.bu.edu/~best/courses/cs697/S08