This is a graduate level course.

1 Description

Course focuses on research and theory on the topic of immediate interactive behavior broadly defined. The ultimate goal of the study of immediate interactive behavior is understanding the interplay among the elements of embodied cognition (cognitive, perceptual, and motor operations), dynamic and responsive task environments, and the task being performed by the user. This semester’s seminar emphasizes a key topic in immediate interactive behavior; namely, the nature, collection, and analyses of eye data.

There are three parts to this course each part is associated with a weekly meeting.

1.1 Individual Session

Each enrolled student will meet once each week with the instructor for an hour-long meeting. The focus of the meeting will be the student’s current research and readings. It is expected that each week, the student will be able to discuss with the instructor new readings relevant to their research topic, discuss the design, conduct, and analysis of empirical studies, as well as the design, conduct, and evaluation of computational cognitive modeling. It is NOT expected that all three of these topics will be discussed each week.
1.2 Research Issues Session

All students will meet once each week with the instructor for an hour-long group meeting. This meeting will also include any and all undergraduate students who are engaged in collaborative research with the graduate student and/or engaged in research related to the graduate student’s. The focus of this meeting will be on methods and techniques for experimental data collection, data analysis, display of data, and modeling. On different weeks, different students will present work-in-progress to the group.

1.3 Reading Seminar Session

All students will meet once each week with the instructor for a 3-4 hour reading seminar discussion. This semester’s discussions will be centered around the book:


However, for each week there may be one or more papers that will be read by all students in addition to or in lieu of a reading from the book. These readings will be selected based on their relevance to eye tracking research, in particular, and the discussions around the book, in general. Such readings will emphasize late-breaking research papers of relevance to the Masters, Doctoral, and other research being actively planned or conducted at Rensselaer. Many of the readings will be recommended by the student based on their independent readings and discussions with the instructor. Other readings will be selected by the instructor. These additional readings will be announced in class and/or by email.

On most weeks, the student(s) leading the discussion will be selected during the class, at random, by the instructor. On other weeks one or more students may be selected or volunteer to lead the discussion based on the relationship of the reading to their research.

1.4 PreRequisites

Permission of the instructor. This is a graduate research seminar. However, interested undergraduates are encouraged to contact the instructor to discuss their participation in the seminar. Responsibilities and assignments for undergraduates will be discussed and agreed on, in writing, by the student and the instructor. Graduate students interested in an introduction to eye tracking research are also encouraged to take the course. In most cases, fewer credits would be offered to such students.

1.5 About the Instructor

Professor Gray has been a member of the Cognitive Science Department at RPI since the Fall of 2002. For details on his research interests and activities see his
2 Honors Policy

My expectation is that all of the work you do for me in this class will be the work of one individual. Exceptions to this rule will be broadcast to the class by email.

As you will all find out, I explicitly encourage you to engage in public (using email and other media to broadcast a message to the entire) or private (one-to-one) discourse regarding the readings and topics raised in this class. Study groups are encouraged.

If any of you have any questions regarding current situations or future situations, remember that I am your first contact on this. Please come and see me.

3 Grading Policy

3.1 Examinations

There are no examinations

3.2 Active Participation

45% Participation in each of the 3 weekly meetings

All students are expected to participate in each of the three weekly sessions; individual session with the instructor, Research Issue session, and Reading Group session.

For the Reading Group: All students are expected to have done the weekly reading and come to class prepared to lead a discussion of any or all parts of it.

For the Research Issues: (A) All students are expected to report to the group the progress they made in the last week and their goals for the next week. (B) All students are expected to listen and contribute to the reports of the other students. (C) All students are expected to provide a minimum of one 15-30 min oral and slide presentation on a topic defined in their weekly meetings with the Instructor.

For the Individual Session: Each student is expected to bring evidence of the progress and problems they dealt with in the last week to their meeting with the instructor.

55% Progress in Planning, Conducting Research, Analyzing, Modeling, and Publishing Research

In conjunction with the Instructor, each student is expected to develop a timetable and sets of goals for research accomplishments for that semester. For first year graduate students this
plan should include, at a minimum, a survey of the literature and an integrative, written, literature review. For more senior students this plan should include one or more of the following written products; a conference paper, thesis proposal, grant proposal, draft of a dissertation, draft of a journal paper, or other written intellectual product. In addition, all students are expected to develop a oral presentation and accompanying visual slides for a minimum of one talk each semester.