

# François Guimbretière

## Teaching Statement

### Philosophy

My interest in teaching comes from my own curiosity about the world around me. In my desire to understand the outside world better, I have always been eager to learn more. As a teacher, my role is to elicit a similar enthusiasm toward learning by helping my students foresee how knowledge can help them understand the world and provide them with powerful tools to solve complex problems.

Toward that end, my teaching philosophy is based on teaching a sound theoretical basis and supporting it with concrete examples. These examples should bring the theory to life by showing how it can be used to understand and analyze complex problems. Going beyond the classroom, I see the design tradition of “Learning by Doing” as a key part of a human computer interaction curriculum. This hands-on experience provides a further illustration of how theoretical knowledge can be applied and a better understanding of its practical limitations. It also lets students acquire the basic skills to rapidly prototype, implement and evaluate their work.

### Experience

While at Stanford, I was a teaching assistant for two courses: Introduction to Compilers taught by Professor David Dill and Programming Languages taught by Professor John Mitchell. I prepared and conducted problem sessions, assisted students during office hours and helped prepare and grade exams. Both experiences were very rewarding. I enjoyed interacting with students, and was delighted to see that I was able to elicit enthusiasm and help them understand in their own terms the material covered in the class.

During the past two summers, I have supervised undergraduate summer intern projects. In 2000, I supervised the construction of an overhead scanner prototype. Last summer, I worked with an intern on a controlled experiment to compare several menu selection techniques. Under my supervision, the student designed, implemented and ran the protocol on 18 subjects. We also worked together on the analysis and critical evaluation of the results. It was a rewarding experience to work with an enthusiastic newcomer, who provided me with a new point of view on my work. From these and other experiences advising students, I am looking forward to establishing and leading my own research group.

### Goals

I would like to help develop a well-rounded curriculum in the field of human computer interaction, from introductory classes to advanced seminars. I think this curriculum should emphasize the multi-disciplinary nature of the field and should offer tracks well suited for both future practitioners and research-minded students. In particular, I would enjoy teaching the following courses:

**Introduction to human computer interaction design:** This introductory class will cover the characteristics of human and computer systems, major models for user interaction, task analysis and evaluation techniques. It will include a small project so that students can get their first hands-on experience in the field.

**Interaction design studio:** As a follow-up to the introductory course, this studio will introduce advanced design techniques. At the core of the course will be a significant design project, which will cover the basic steps of interface design.

**Interdisciplinary interaction design:** This course will provide the opportunity for small teams to develop innovative technology prototypes combining product and interaction design. I hope to be able to co-teach this course with an industrial designer.

**Visualization: from perception to understanding:** Starting from the basic principles of human perception and looking at the extensive body of knowledge in printing and art, this research seminar will explore how to develop more effective visualization techniques.

**The physical interface: from sensing to interaction:** This seminar will study available input technology and how it can be used to design better user interactions. Emphasis will be on providing a richer user experience by blending input from different sensors. I hope to be able to co-teach this course in collaboration with the electrical engineering department.