Within the framework of a research contract with a hospital, we are seeking a student to design a communication interface and a graphical user interface (GUI), on a PC/Windows environment. The objective is to control a machine for measuring the deformability of red blood cells. This machine, called an Ektacytometer, is unique in Europe. It is used to detect certain rare hereditary diseases, notably widespread in Africa and Asia.
Description of the Project:

- Participation in the evaluation and the choice of the development tools for the Human/Computer Interface (HCI);
- Design on PC of the graphical user interface to command a controller card through the serial port or USB. This GUI shall allow the execution of stored or configurable sequences of measurement. It will allow the display and handling of data (curves, images, values etc.)
- Management and storage of data, on the PC, corresponding to patients and test results. The data is sent by the controller card and the image processing program. Restoration of curves from saved values;
- Interface with the image processing program;
- Test and validation of the communication with the controller card;
- Test and validation of the code.
- Drafting of documentation.

Required Skills:

Good knowledge of C++ programming (knowledge of MFC or QT/Trolltech, familiarity with image processing and/or analysis a plus).

Supervisors: H. Talbot h.talbot@esiee.fr, A. Finkelstein a.finkelstein@esiee.fr