Postdoctoral Researcher Mentoring Plan

This plan broadly outlines how the PIs will mentor the postdoctoral researcher participating during the second and third years of the project. Given the proposal's interdisciplinary nature at the intersection of applications, algorithms, architecture, and VLSI, we will recruit a postdoc that is interested in at least two of these fields. We have specifically chosen for the postdoc to start in the second year to give the PIs a full year to carefully recruit a postdoc that is a good match for the project.

The PIs' research groups are part of the Computer Systems Laboratory (CSL) which includes seven faculty and over 25 Ph.D. students that study hardware and software techniques for improving the cost, performance, programmability, reliability, and energy efficiency of computer systems. While the postdoc will be jointly mentored by both PI Studer and Co-PI Batten, the postdoc will also be a valued member of the broader CSL community. This plan makes extensive use of Cornell's Office of Postdoctoral Studies (see `http://postdocs.cornell.edu` for more details and the attached letter of commitment from the director).

Orientation

After joining the project, the postdoc will receive an orientation by the PIs to discuss a variety of important topics including: project expectations; career goals; authorship of publications (especially at transitions into and out of CSL); freedom to pursue own research interests versus the goals of this project; and resources within both CSL and the University. The postdoc will be expected to give a seminar at one of our weekly CSL meetings to introduce his or her past research to the broader CSL community. The postdoc will also be required to attend specialized orientation sessions organized by the Office of Postdoctoral Studies.

Career Development Plan

Following an initial orientation period, the postdoc will prepare a written career development plan in collaboration with the PIs and the Office of Postdoctoral Studies. The career development plan will include a self-assessment of strengths/weakness, identification of specific skills to be improved, and a roadmap for improving these skills over the two-year appointment. In addition to one-on-one mentoring by the PIs, the postdoc can take advantage of seminars through the Office of Postdoctoral Studies such as "Interviewing and Negotiating for Academic Positions" and "Understanding Leadership and Personal Style."

Experience with Preparation of Grant Proposals

The postdoc will be involved in the preparation of grant proposals by both PIs to learn best practices in grant writing including: identification of key research questions; description of approach and rationale; and construction of a project roadmap and budget. The postdoc will gain experience with various funding agencies including the National Science Foundation and the Defense Advanced Research Projects Agency.

Publications and Presentations

The postdoc is expected to submit several publications during the two-year appointment both as a contributing and lead author. The PIs will provide guidance and training in how to effectively: lead a small research project; prepare a technical manuscript; and present findings at a top-tier research conference.

Teaching Development

The postdoc can take advantage of programs offered by the Engineering Teaching Excellence Institute (`http://www.engineering.cornell.edu/academics/teaching/teaching_excellence`) and the Cornell Center for Teaching Excellence (`http://www.cte.cornell.edu`). Both PIs have participated in seminars and multi-day workshops through these centers and have found them to be helpful in improving our teaching. There will be opportunities for the postdoc to prepare laboratory sessions and/or mentor student projects for the graduate-level courses taught by the PIs and discussed in the project description.

Evaluation and Feedback

The postdoc will receive a biannual written review by the PIs based on the initial career development plan. This review process will help establish important milestones toward completion of the proposed project as well as advance the career path of the postdoc.