Majority of our implementation were based on work described in [1], with a few modifications. CMOVs are injected in rename [1], but we implemented that in fetch stage itself. This has to do with the way 721sim is modeled. Instructions in the timing simulator are mapped to the functional simulator running ahead in Fetch stage. It would be less complex if we insert CMOVs rather than in rename to avoid this mapping to functional simulator.

One-on-one sessions with Dr. Eric Rotenberg greatly helped us to achieve the outcomes of this project.

References

[1] A. Klauser, T. Austin, D. Grunwald and B. Calder, "Dynamic hammock predication for non-predicated instruction set architectures," Proceedings. 1998 International Conference on Parallel Architectures and Compilation Techniques (Cat. No.98EX192), 1998, pp. 278-285, doi: 10.1109/PACT.1998.727261.