Slow and Steady: Measuring and Tuning Multicore Interference

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Introduction

- Multicore interference results in slowdown of program execution.
- Existing tests show slowdown in the ballpark of 300x times slowdown.
- These tests rely on designing enemy programs to be run in parallel to the main one.
- However, this process of testing is highly manual.
- To add, the results may not be reproducible due to lack of parameters to define the testing environment more accurately.

Contributions in this work

- Set of principles of how enemy programs can be evaluated, especially w.r.t. reproducibility.
- An auto-tuning framework to automatically refine enemy programs to enable maximum interference.
- Experimenting the auto-tuning tool on prior work based enemy programs.