

Peer Review

Review of: "WebRISC-V: A 64-bit RISC-V Pipeline Simulator for Computer Architecture Classes"

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The paper introduces a timely and accessible tool for visualizing RV64IM pipeline execution. Its browser-based nature lowers the barrier to adoption in classroom environments. The simulator is positioned as more interactive and cycle-accurate than existing tools, which is a compelling contribution. However, the simulator description lacks clarity about which exact features are unique to WebRISC-V. What distinguishes it from tools like Ripes in practice—e.g., does it offer better hazard classification? More intuitive visual feedback? Instructor controls for assessment? A concise bullet list or table of differentiators in the introduction or early sections would help frame its novelty more persuasively.

Although the paper assists students in overcoming challenges related to understanding pipeline points, how does WebRISC-V scaffold or support students to prevent them from feeling overwhelmed? For instance, does it provide simplified modes, guided views, or focus+context mechanisms? Addressing this early in the paper would reflect a thoughtful approach to pedagogical design.

Another significant shortcoming of the paper is the absence of a comprehensive description of its internal implementation. This deficiency undermines the academic rigor of the comparison. Conversely, it remains unclear how branches impact the pipeline. When should it be flushed, and when should we employ branch prediction and other techniques to address branch hazards?

Declarations

Potential competing interests: No potential competing interests to declare.