



Open-source and FPGAs: Hardware, Software, Both or None?

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CCS CONCEPTS

• **Hardware** → **Best practices for EDA; Reconfigurable logic and FPGAs**; • **Computer systems organization** → **Reconfigurable computing**.

KEYWORDS

Reconfigurable Computing; FPGAs; EDA; Open-source

PANEL OVERVIEW

Following the footsteps of the open-source software movement that is at the foundation of many fundamental infrastructures today, *e.g.*, Linux, the internet, *etc.*, a growing amount of open-source hardware initiatives have been impacting our field, *e.g.*, the RISC-V ISA, Open chiplet standards, *etc.*

Specifically to FPGA technologies, several projects have started to revolutionize the way we approach EDA tooling, *e.g.*, with the F4PGA toolchain or the exploration / manufacturing of FPGA fabrics, *e.g.*, with the VTR and OpenFPGA projects. The electronics

industry is starting to see the benefits of fully open-sourced hardware and software as it provides more flexibility, longevity, and adaptability to each engineer's design flow.

However, is the open-source movement a micro trend in our FPGA community that will vanish over time? Is it going to profoundly impact it? Will it any impact on architectures or only impact EDA?

The goal of this panel is to provide an overview of the current panorama of open-source technologies (both hardware and EDA) for FPGAs and to debate on its benefits to our community.

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