OpenFPGA: Create Your Own FPGA with Open-Source Tools

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Date: Sunday, May 15 from 12 – 3p.m., Eastern Time

This workshop will introduce the participants to OpenFPGA and showcase its capabilities and features through live demos. It will also provide them with hands-on training on how to use the OpenFPGA framework. It is targeted towards any FPGA enthusiasts and researchers who are interested in exploring novel FPGA architectures and/or fabricating their own custom FPGAs.

What you will learn:

- FPGA architects will learn how to efficiently implement FPGAs and generate layouts so that their architecture innovation can be quickly validated
- FPGA toolchain developers will learn how to get Quality-of-Results (QoR) on realistic and novel FPGA fabrics
- FPGA circuit designers will learn how to quickly integrate novel circuit components into FPGA fabrics and evaluate power, performance, and area
- FPGA verification engineers will learn how to generate test benches that can be readily used for verification of the FPGA fabric
- FPGA programmers will learn how to generate bitstreams for their Verilog designs and analyze timing and area results

At the end of the workshop, the participants will be able to:

- Define a custom FPGA architecture using an XML-based architecture description language
- Generate netlists and layout for these custom FPGAs using the OpenFPGA tool flow
- Generate bitstreams for Verilog designs that can be configured for the custom FPGAs