



ARM Processor on Alveo FPGA

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Motivation

FPGAs are becoming more and more prominent in AI, Security, Robotics, and real-time applications. This project aims at:

1. Getting a multi-core ARM/RISC-V processor running on Alveo card
2. Run C/C++ and Rust example benchmarks
3. Useful for future hardware-software co-design projects on FPGA without host.
4. Port hardware-unfriendly cryptographic computations onto FPGA-ARM cores instead of RTL.

Goals and Tasks

-  Understand how FPGA design tools work.
-  Map processor core to FPGA and get it working.
-  Perform experimental benchmarks.

Literature

Courses & Deliverables

- ☒ **Introduction to Scientific Working**
Short report on background
Short presentation
- ☒ **Bachelor Project**
Project code and documentation
- ☒ **Bachelor's Thesis**
Project code
Thesis
Final presentation

Recommended if you're studying

- ☒ CS
- ☒ ICE
- ☒ SEM

Prerequisites

- > Strong interest in hardware design and system integration

Advisor Contact

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