

INTRODUCTION TO SMARTDIGITAL_DEVELOPMENT_LAB

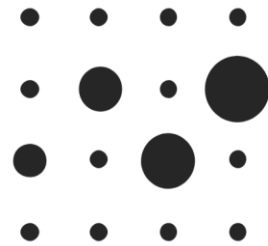
SUCCESSFUL VW-STIFTUNG APPLICATION

26.06.2023 | D.ARUTINOV, M. SCHLÖSSER, S. VAN WAASEN

VW STIFTUNG

Facts and figures

- The VW foundation is funding science for more than 60 years



Volkswagen**Stiftung**

- ZEA-2 and AUG **submitted** proposal end of year **2021** (which was successful)
- The funding has **started** on **01.01.2023**
- Total funding ~ **150k€** (~ 130k€ for hardware / software)
- Main idea: SMART|Digital_Development _Lab

THE IDEA AND GOALS

SMART|Digital_Development_Lab

→ Establish own research capabilities in Georgie

- AUG has already FPGA course in its teaching program ← a natural candidate!
- Support AUG with dedicated hardware and software as well as know-how to raise the level of education and experience to meet necessary working standards
 - Implement an FPGA lab accessible for bachelor, master programs and beyond
 - Involve in existing ZEA-2 projects
 - Various ZEA-2 projects are based on FPGA / digital designs
 - Remote (done in Georgia) development of digital designs is feasible
 - Enable additional project acquisition from other research partners and industry

STUDENT INVOLVMENT

- Selection process for 3 student employees and a supervisor is in process
 - A possibility to work “full time” in parallel to studies
 - Advanced master thesis projects possible based on performed work!
- Shared-financing between Rustaveli, AUG, and ZEA-2 under negotiation
- Plans to further expand up to 7 students

FIRST PROJECT

- A new experiment at CERN – SHiP (Search for Hidden Particles)
- ZEA-2 task: FPGA based readout electronics for several detectors ← a natural task for the Smart Lab!
- Working on actual hardware should be possible “in situ” as well as remotely (hardware located in ZEA-2)

Current Problems:

- Georgia under strict import restriction at the major FPGA provider Xilinx. Possibly @ other companies as well. But Xilinx is our main choice (due to internal workflow...)
- Possible workarounds are under discussion

OUTLOOK

- Our expectation for the lab run-time → 10+ years
- We plan to establish a scientific advisory board for more efficient management → ongoing
 - Possible candidates are welcome
- Expansion of project acquisition from other partners and industry!