Md Rubel Ahmed

(+1)813-570-5540 4502 Blue Tee CT, Apt: 202, Florida-33613 mdrubelahmed@mail.usf.edu

SUMMARY

- Motivated researcher for secure, efficient, and evolvable computing system.
- Current exposure is on the specification mining of reactive systems.
- Solid background in FPGA Design.
- Expertise in MIPS32.
- Experienced in teaching and conducting Computer Architecture course.

EDUCATION

Doctor of Philosophy in Computer Science and Engineering *Exp. Dec. 2023*
University of South Florida, Tampa, FL CGPA: 3.67/4
Bachelor of Science in Computer Science and Engineering *March 2017*
Khulna University of Engineering and Technology, Bangladesh CGPA: 3.23/4

TECHNICAL STRENGTHS

Programming Languages	C/C++, Verilog, VHDL, Python, Java
CAD Tools	Mentor: ModelSim, CalibreDRC and Ledit
	Xilinx: ISE Webpack, Vivado HLx and EDK
Architectural Simulator	Simplescalar and M5 Simulator
Miscellaneous	ABC(Synthesis tool), MATLAB, Bash Script, AWK, Sed, Tcl

EXPERIENCE

Instructor/Teaching Assistant *August 2018 - Present*
University of South Florida
- Teaching Computer Architecture course at the Dept. of CSE, USF (Summer 2019)
- Assisted students with the courses Computer Architecture, Software Engineering, FPGA Design.

Software Engineer *Nov 2017 - July 2018*
Synchronous ICT
- Developed systems for real time conferencing
- Multimedia processing using FFMPEG.
- Worked for data driven mobile app using React Native.

ACADEMIC PROJECTS

- **> 128 bit prime factorizer :** Designed FPGA implementation of prime factorizer for larger numbers >128 bit using VHDL and implemented on Zedboard.
- **Single Cycle Processor:** Designed a single cycle processor with ALU, and multibank main memory in logisim and tested with .
- **Radiation induced transient faults analysis:** Modeled and optimized radiation induced transient faults at all levels of the VLSI design flow: architectural, logic, transistor and layout.
- **Memory system performance analysis:** Analyzed memory system performance using M5 simulator and 4 SPEC-CPU2000 benchmarks.
- **Addition and Multiplication matrix operations:** Designed an FSM controller to implement the multiplication and addition logic using Vivado and prototyped on Basys 3 FPGA board.

PUBLICATIONS

- Amit Sutradhar, Md. Samiul Haque Sunny, Manash Mandal, **Rubel Ahmed**, "Design and construction of an automatic electric wheelchair: An economic approach for Bangladesh, 2017 3rd International Conference on Electrical Information and Communication Technology (EICT)

AWARDS/ACTIVITIES

- A.Richard Newton Young Student Fellowship award 2019 from Design Automation Conference.
- Presented poster in Florida Institute for Cybersecurity(FICS) research Conference,University of Florida, 2019.
- Presented poster in 56th Design Automation Conference, Las Vegas, NV, 2019.
- Trainer for contest programming in KUET, Bangladesh.