

Wireless Systems Undergraduate Researcher for Advanced FPGA/System-on-Chip Transceiver Design

Job Description

The Center for Connected Autonomy and AI at College of Engineering and Computer Science/I-SENSE is seeking an undergraduate student researcher with strong interest in design and implementation of digital signal processing and PHY/MAC algorithms for wireless communications. The candidate will work with Xilinx Zynq-based software-defined radio platforms to test novel algorithms for adaptive wireless communications. This paid position can be based at any FAU campus, but regular (2x month) meetings will be expected at Boca Raton campus, with more frequent meetings via teleconference.

Education Requirements

- 3+ years undergraduate coursework in computer science, computer engineering, computer architecture or related field or
- Candidates meeting the technical requirements below with good knowledge in modern model-based design techniques for FPGA/SoC

Technical Requirements

- Software development with Xilinx FPGA devices (with embedded CPU/GPU)
- Model-based design for FPGAs with MATLAB & Simulink
- Familiar with Xilinx's build flow including design entry in Verilog, synthesis, place and route, timing constraints
- Hands on experience with lab debug equipment, such as oscilloscopes and logic analyzer
- Background in computer architecture including
 - Bus fabric, especially AXI, PCIe
 - Tiered memory systems
 - System debug architecture
- Experience with industry-standard protocols such as USB, I2C, SPI, etc

Other Preferred Skills

- MATLAB, Simulink and/or Python
- HDL coder
- C, C++ and System C
- Verilog/VHDL
- High-level Synthesis with Vivado HLS
- Digital signal processing
- Knowledge of System Generator, and/or DSP builder

Interested undergraduates and MS students can email Dr. Sklivanitis (gsklivanitis@fau.edu) a cover letter, CV, unofficial transcripts and recommendation contacts (if any).

The position is available for the Spring 2020 (until May 8, 2020) semester with a start date of as soon as possible and a salary of \$15/hr.