

FATİH EMRE ŞİMŞEK

Phone: +90 505 804 8283, Email: simsekfe@gmail.com

Summary

FPGA digital design engineer, 4 years of experience on FPGA design, 1 years of experience on digital board design.

- RTL design with Verilog, VHDL.
- Altera Quartus II, Qsys, Signal Tap Logic Analyser, PowerPlay Early Power Estimator, TimeQuest Timing Analyser tools.
- Xilinx ISE, Vivado tools.
- Schematic capture and PCB layout design.
- Mentor Graphics Design Architect, Board Station, HDL Designer, ModelSim tools.
- Assembly, Python, C and JAVA experience.
- Matlab and Octave experience.
- PSpice-5Spice experience.
- COMSOL Multiphysics experience.
- Hands on experience with lab equipments such as oscilloscopes, signal generators.

Experience

Expert Digital Design Engineer

Feb 2013 to Present

ASELSAN Inc. — Ankara, Turkey

- Owned full-cycle development of FPGAs including implementation, functional simulation, synthesis, static timing analysis, board level integration:
 - Implemented communication interfaces such as UART, I2C, SPI, and BISS on FPGAs.
 - Implemented multiport interface for XAUI PHY, Ethernet MAC to stream data via fiber optic interface.
 - Implemented analogue video decoder and encoder in PAL and PAL Square format on FPGAs
 - Implemented thermal and night vision video processing on FPGAs.
- High speed electronic board design including schematic and PCB layout:
 - Joined hardware design for 18-20 layer PCB boards consisting of at least 100 different individual components.
 - Performed hardware design of an electronic board which is used to test the interfaces of an electronic board which has Cyclone V FPGA on it.
 - Board level debug of high speed transceivers SFP, XFP and high speed interfaces 10G/XAUI, XFI, SFI.
 - Board level debug of a camera interface board containing Cyclone V FPGA, LVDS transceivers, RS422 transceivers, DDR3 SDRAM.
 - Board level debug of fiber optic interface board containing Spartan-3 FPGA, LPDDR2 SDRAM, Camera Link receivers, clock generators.

System Engineer

Jul 2010 to Sept 2012

Bilkent Underwater Acoustics Technologies Research Center — Ankara, Turkey

- Design and simulation of coils via COMSOL Multiphysics, and realization of the coils.
- Design and realization of D-type amplifier.
- Measuring the magnetic field via Bartington Spectramag-6 magnetometer and filtering in MATLAB.
- Environmental condition tests of the coils and pcbs.

Intern,

Jun 2009 to Jul 2009

HAVELSAN Inc. — Ankara, Turkey

- Intranet, internet and network switch maintenance of the company.
- Designed a chat program on JAVA via socket programming.

ASELSAN Inc. — Ankara, Turkey

- Worked on Microchip PIC programming with C: Reading analogue temperature sensor and displaying it on 7-segment.

Education

Phd., Electronics Engineering

2017 to Present

Gebze Technical University — Gebze, Kocaeli

M.S., Electrical & Electronics Engineering, GPA: 3.03 / 4.00

2013

Bilkent University — Ankara, Turkey

Master's Thesis: Finite Element Method Based Simulations of Low Frequency Magnetic Field in Seawater

B.S., Electrical & Electronics Engineering, GPA: 3.04 / 4.00

2010

Bilkent University — Ankara, Turkey

Foreign Languages

- English: TOEFL IBT: 87 (Jan 2010)
- German (Basic)
- Spanish (Basic)

Accomplishments

- Three High Honour and one Honour Certificate of Bilkent University.
- Studied 2nd year tuition-free at Bilkent University as result of outstanding achievement scholarship (GPA:3.95/4.00).

Certifications and Training

- Feb 2018, ALTERA Incremental Compilation (by KUANTEK) - Ankara, Turkey
- Feb 2018, ALTERA Static Timing Analysis (by KUANTEK) - Ankara, Turkey
- Nov 2017, C Programming for Embedded Systems (by DOULOS) - Ankara, Turkey
- Apr 2017, Embedded Design for Intel SoC FPGAs (by DOULOS) - Ankara, Turkey
- Jan 2017, Verilog, System Verilog & UVM Fundamentals (by ANKA-SYS) - Ankara, Turkey
- Sept 2016, The Intel SoC FPGA Developer Forum (ISDF)- Frankfurt, Germany
- Feb 2016, DO-254 Based FPGA Digital Design Flow (by PLC2) - Ankara, Turkey
- Apr 2015, Building Gigabit Interfaces in Altera Transceiver Devices hands on training days - Ankara, Turkey
- Jun 2014, Introduction to Quartus II, ALTERA & EBV hands on training days -Bolu, Turkey
- Apr 2013, Mentor Graphics DxDesigner Training- Ankara, Turkey
- Mar 2013, Expert VHDL (by DOULOS)- Ankara, Turkey