

AHMAD SALMAN

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OBJECTIVE

Seeking career-related experience in computer engineering. Special interest in reconfigurable hardware, FPGAs, embedded systems, cryptographic applications, microcontrollers and networking.

Professional Summary

- A System Administrator, with a proven strong team work and communication skills through two years and half of practical experience in Systems Administration. Also a firmware designer responsible for designing and implementing embedded systems on microcontrollers. Designing and instructing courses for a university program. Currently researching partial dynamic reconfiguration and hardware/software co-design on FPGAs. Proven excellent skills.

Education

Doctor Of Philosophy in Computer Engineering, Fall 2013

Research Interest:

- Security of cryptographic systems.
- Investigating Partial Reconfiguration and their usage and usefulness for cryptographic hardware modules on wireless sensor nodes.
- Power consumption in relation to design area in FPGA implementations.

Master Degree in Computer Engineering, Spring 2011

George Mason University, GPA 3.58

Thesis Title: "IPSEC Implementation in Embedded Systems for Partial Reconfigurable Platforms"

Projects:

- Implementing Partial dynamic reconfigurable system that controls two SHA-3 Candidates (Blake and JH) modules through Microblaze microprocessor using Xilinx ISE, EDK and PlanAhead tools.
- Implemented Grain cipher for FPGA using Xilinx ISE tools ciphering/deciphering process was simulated using Modelsim.
- Implementing RSA cipher using Montgomery multipliers.
- Simulated the breaking of the Enigma machine code.

B.Sc. Computer Engineering, July 2002

University of Arab Academy for Science and Technology

Senior Design project:

- Designed and implemented a NIC (network interface card).
- Implemented a 4-bit MIPS Processor using Xilinx foundation tools.

Languages: Arabic (Mother Tongue), English (Fluent) and French (Fair).

Technical Certifications

- Cisco Certified Network Associate, (CCNA).
- VLSI- Based Communication Application Design, (Mentor Graphics).
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Publications

- Ahmad Salman, Marcin Rogawski, and Jens-Peter Kaps. **Efficient hardware accelerator for IPsec based on partial reconfiguration on Xilinx FPGAs, Reconfig'11, 2011.**
- Ahmad A. Salman. **IPsec implementation in embedded systems for partial reconfigurable platforms**, ECE Department, George Mason University, Fairfax, Virginia, USA, May, 2011, Master's Thesis.

Computer and Programming Skills

Hardware Circuits Design and Simulation Tools:

VLSI: Xilinx FPGA, Modelsim, IC station, PCB, VHDL and Verilog.

Networks:

Administering and implement Network Structure, Hardware Maintenance, Cisco Routers, Cisco and 3com Switches Series, VPN, TCP/IP.

Programming Languages:

C, C++, HTML, Assembly Language, PASCAL, SQL, V.BASIC.

Programming Concept:

Object Oriented Programming, Windows Programming, Multi-Thread programming.

Programming Tools and IDEs:

- **Good knowledge:** Turbo C, Turbo C++ compiler, Xilinx ISE(9.1-13.2), Xilinx EDK(9.1-13.2), Xilinx PlanAhead(10.1-13.2), Xilinx Coregen, Aldec Active-HDL 7.2, Logic Analyzer.
- **Familiar with:** Borland C++ Builder, Chipscope, Visual Studio .NET2003, Macromedia Flash, MatLab, Macromedia Dreamweaver, Front page, Adobe Photo Shop.

Operating Systems:

Windows 2000 advanced Server, XP professional, 2003 server, 7, Linux

Work Experience

USC-Information Science Institute, Arlington, USA

Summer 2012

Researcher

- Developed a domain specific cryptographic core FPGA and ASIC chips.
- Implemented a Reconfigurable Crypto Core as part of a Microprocessor Embedded System.

George Mason University, Fairfax, USA

Fall 2009 to Spring 2012

Instructor

- Digital Logic Design using VHDL Lab.

Duke University, Durham, USA

Summer 2009 and Summer 2010

Instructor

- Designing and Teaching the Cryptography class for Duke TIP program.
- Working with gifted students.

Duke University, Durham, USA

June 2008 to August 2008

Instructor

- Designing and Teaching the Cryptography class for Duke TIP program.
- Working with gifted students.
- Assisting in teaching the Robotics class for Duke TIP Program.

Micronics, Cairo, Egypt

June 2006 to April 2007

Embedded systems Designer and Programmer

- Designing C codes for special purpose microcontrollers and embedded systems.
- Working on 8051 microcontroller family using Keil and Raid tools.
- Designing PCB using Altera tool.
- Programming of LED screens with GSM modem using AT Commands.

Air Defense Forces, Cairo, Egypt**October 2003 to April 2006**

- Serving in the military, Air Defense forces, in a rocket launcher battalion with a degree of a first lieutenant.

Self Employed**January 2004 to August 2005**

- Implementation and installation of LAN in several apartments in a building and providing high speed internet sharing.
- Setting up a network including all hardware/software installation for Camelot Company.
- Installation, maintenance, and upgrade of PC software applications, utilities, and operating systems.
- Assist with installation and maintenance of new and existing WAN and LAN connections.

Arab Academy For Science And Technology, Alexandria, Egypt**June 2003 to August 2003****Network Administrator Assistant**

- Setup and maintain basic network operations, including assembly of network hardware, and provide assistance to the AAST team.
- 3com and Cisco routers configurations and troubleshooting.
- Setting up Cisco switches and VLANs configuration.

Skills

- Excellent interpersonal skills and customer service oriented.
- Demonstrate a strong sense of duty, responsibility, discipline and attention to details.
- Exceptional time management, organization, verbal and written skills.
- Excellent troubleshooting and problem solving skills with little supervision.
- Process approach to continuous improvement.