Qian Cui

Personal Data

Phone: +1 613-322-0629
Email: cuibuaa@gmail.com
Homepage: http://cuibuaa.github.io

Research Interest

- Machine Learning
- Data Mining and Analysis

Work Experience

Jan 2013 - Jul 2015 | **Embedded Engineer** at **Samsung Electronics**, Beijing
Develop Linux wireless driver and software architecture of firmware for Samsung wiGig (*a new wireless technology based on 60Ghz*) chip. News for this work: Samsung wiGig News
Port kernel to Samsung devices, responsible for optimization of power management on heterogeneous system (ARM A15 and A7)

Dec 2009 - Dec 2012 | **FPGA Engineer** at **Space Star Co. Ltd**, Beijing
Design parallel architecture and high-speed I/O solution including FPGA logic and hardware circuit

Education

Jan 2016 - Now | PhD of Computer Science
University of Ottawa, Ottawa
Research Direction: Network Security

Sep 2007 - Dec 2009 | Master of Computer Architecture in Computer Science
BeiHang University, Beijing
Thesis: "High-Performance Data Exchange Mechanism for PSDM (Prestack Depth Migration) Hardware Accelerator"

Sep 2003 – Jul 2007 | Undergraduate Degree in Computer Science
BeiHang University, Beijing
Thesis: "Application in Distributed Systems with Domain Specific Languages Click"

Projects

Jan 2016 - Present | **Phishing sites detection**
Various crawlers to fetch information of sites, such whois, DOM,etc.
Use clustering and machine learning to detect phishing sites
All the works are done by Python

Oct 2014 - Jul 2015 | **Web crawler and web robot based on Python**
A Web crawler to extract all the blogs and images in Ren-Ren(Chinese Facebook) for any authorized account
Some web robots to help me deal flash sale and other misc things

	Optimize the parallel performance for the crawler
Nov 2013 - Present	**wiGig wireless Linux driver and software architecture** Optimize cache access efficiency during DMA operation Optimize DMA operation by pipelined DMA ring Optimize socket transmission for jumbo frames Get final throughput: 3.0Gbps in UDP, 2.5Gbps in TCP
Jan 2013 - Oct 2013	**Kernel porting and power optimization for Samsung Exynos 5410 chip (four A15 cores and four A7 cores)** Port kernel and uboot to Exynos 5410 chip Analyse and optimize network performance with a thread monitoring the net throughput to choose different mechanisms (*only A7/only A15/mixed*)
May 2011 - Dec 2012	**High-Speed prototype system based on PCI/PCI-E bus** Design DMA Engine based on Weighted Round Robin strategy, achieving up to 9Gbps throughput Design hardware circuit and software of data capture system based on PCI/PCI-E bus(*including FPGA logic and driver*)
Jan 2010 - Apr 2011	**Optimization Viterbi and RS decoding algorithm** Implement Viterbi decoding parallel architecture based on Ping-Pong buffering strategy Implement RS decoding parallel architecture based on interleaving dividing strategy

Issued Patents

Jun 2011	CN 102361460 A (*in Chinese*) General high-speed parallel cycle interleaving Viterbi decoding method Translated by Google
Sep 2010	CN 101969358 A (*in Chinese*) High-speed parallel RS decoding method for space communication Translated by Google

Publications

- Qian Cui, Guy-Vincent Jourdan, Gregor v. Bochmann, Russell Couturier, Iosif-Viorel Onut. Tracking Phishing Attacks Over Time. 26th International World Wide Web Conference(WWW '17), 2017
- Qian Cui, Xiaopeng Gao, Xiang Long. Design and Implementation of PCI Express DMA Controller Based on Weighted Round Robin Policy (*in Chinese*). Microcomputer Information, 2010, 26(23):147-149.
- Zhe Zhang, Qian Cui, Xiaopeng Gao, Xiang Long. Modeling Network Application for Multi-Core Architecture (*in Chinese*). Microelectronics & Computer, 2007, 24(10):39-42.

Skills

- Over 50,000 Lines: C/Python/Shell
- Over 40,000 Lines: Verilog/Java