Javad Zandi
Résumé/CV

Homepage
repozitor.com

Messenger
repozitor @Skype

Social
Linkedin

General Information

Official Name: Javad Zandi

Alias: repozitor

Language: Persian(native), English(fluent)

E-Mail: me@repozitor.com

Areas of Interest

Operating System, Binary Analysis, Computer Architecture, Software Engineering

Education

2015 - 2018 **Shahid Beheshti University**
M.Eng - Computer Engineering
Thesis: Automatic exploit generation for dynamic language applications
Thesis grade: 19.25/20

2010 - 2015 **Shahid Beheshti University**
B.Eng - Computer Engineering
Thesis: Flexible function-level hierarchical role based access control for linux
Thesis grade: 19.5/20

Publications

Dec, 2020 **Automatic exploit generation for dynamic language applications** [M.Eng Thesis paper]
Under Review

May, 2019 **Noise robust text independent speaker identification using adaptive formant estimation and MFCC in persian language** [Conference Paper]
Javad Zandi, Mehdi Bekrani, Maryam Hatami
27th Iranian Conference on Electrical Engineering (ICEE)

Jan, 2019 **Theory of fun in game design - translated to persian** [Book]
Javad Zandi, Maryam Hatami, Dorsa Samiei, Sogol Alipor
Publisher: Olom and Fonon Razi

Dec, 2018 **Introduction to web vulnerability and malwares** [Book]
Javad Zandi
Publisher: Olom and Fonon Razi

May, 2018 **Implementation and analysis of a novel low power and portable energy measurement tool for wireless sensor nodes** [Conference Paper][M.Eng Course Paper]

Javad Zandi, Abbas Naderi Afooshteh, Mona Ghassemian
26th IEEE Iranian Conference on Electrical Engineering (ICEE)

Sep, 2015 **LRBAC: Flexible function-level hierarchical role based access control for Linux** [Conference Paper][B.Eng Thesis Paper]
Javad Zandi, Abbas Naderi Afooshteh
12th IEEE International Iranian Society of Cryptology Conference on Information Security and Cryptology (ISCISC)

Patents

Safe and secure database storage architecture for medical network
Javad Zandi, Iranian Patent Number: 139450140003005088
Check document in Iran Industrial Property General Office

Solid-State CD-ROM
Javad Zandi, Iranian Patent Number: 139450140003008758
Check document in Iran Industrial Property General Office

High accuracy liquid level detection system for medical intstrument
Javad Zandi, Iranian Patent Number: 139450140003005087
Check document in Iran Industrial Property General Office

Honors & Awards

2020 **Rank 2nd in 33rd Khwarizmi International Award**
Prize: 3000$ Click to see!

2018 **Top 3 R&D talented student in Iran by Iran's National Elites Foundation**
Click to see!

2017 **Shahid Beheshti University top student in 2017**
SBU News Link, Picture: 1, 2
Prize: 1200$

2016 **Rank 2nd in 18th Khwarizmi Youth Award**
Certificate: click to view!
Prize: 1000$

2016 **Rank 133rd in Computer Engineering among more than 57,000 students in Iranian nationwide master's degree university entrance examination**
Computer Science & Engineering Conquer

2014 **Rank 1st Iran's 5th International Hacking Online Contest cert.sharif.edu**
Hardware Security Sharif CTF 2014
Score-board: cert.sharif.edu
Prize: 2000$

2010 **Rank 930th among more than 600,000 students in Iranian nationwide bachelor's degree university entrance examination**
Mathematical Conquer

2009 **Ranked 1st in the design and development field of 10th Kharazmi Youth Award**
Project Title: Smart CNG capsule for vehicles
View certificate: pdf-fa

2008 Chosen for National Iranian Physics Olympiad
High School Olympiad
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2008 Ranked 1st in Physics Olympiad
High School Olympiad
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2007 Ranked 4th in Mathematics Olympiad
High School Olympiad
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2003 Ranked 1st in Mathematics Olympiad
Middle School Olympiad
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2002 Ranked 1st in Olom Tajrobi Olympiad
Middle School Olympiad
View certificate: pdf-fa

Notable Work

2019 SmartAEG: Smart automatic exploit generation for dynamic type languages
Project Skills: PHP, Formal verification, CDFG analysis, Javascript, Z3, Software emulating
This is my M.Eng thesis project started in 2017, which is my biggest research. This tool was implemented to find out PHP application exploits. After emulating and searching for sink destinations, CPG will be used to generate attack vectors.

2017 PSM – Physical Security Module for HSM
Project Skills: ARM, C, C++, Java, Network Programming, Xilinx Zynq, FIPS 140-2, PKCS11, Embeded Linux, Embeded FS
PSM provides ultra-security against all physical tamper and side-channel attacks for protecting the master key of operations. PSM designed in FIPS 140-2 level-3 standard.

2016 OS Algorithms Simulator
Project Skills: Linux, Qt-Framework, OS scheduling algorithms, OS memory management scheduling, POSIX, C++, Network programming, Multi-thread programming
This simulator simulates many important algorithms visually for students to a better understanding of different CPU and memory algorithms.

2016 Design & implementation of high accurate power measurement tool
Project Skills: ARM, HPC design technique, C, C++, Qt framework, CLI Scripts, Memory Map Design, Linux, HW Design, Test, Computer Architecture, Assembly
PMWSN Paper tool

2015 DNI - Deep Netlist Inspection
Project Skills: VHDL, Verilog, Synopsys, DesignVision, CAD Tools, FPGA, Digital logic design, Flex-Bison parser scanner, Qt-framework, Centos, Cadence, Xilinx ISE, ModelSim, Memory management algorithms
DNI is the second generation of VHDL2NetList(my previous project). It is used for 5th Sharif CTF.

2015 Design & implementation of solid-state CD-ROM
Project Skills: ARM, HPC design technique, C, C++, IDE & SATA Communication Protocol, Qt framework, CLI Scripts, Memory Map Design, Linux, HW Design, Test, Memory heatmap analysis, Computer Architecture, Assembly, AXI-AMBA Protocol
Solid-State CD-ROM could be used as real CD-ROM, without any extra interface. I earned 30,000$.

2015 **Design & implementation of high accuracy liquid level detection system for the medical instrument**
Project Skills: SoC Design, ARM, HPC design technique, C, C++, CLI Scripts, Linux, Analog Design, Test
New novel methodology for level detection in medical instruments, like Hitachi. I earned 23,000$

2015 **Design & implementation of safe & secure database for medical network**
Project Skills: SQL, NFS, Linux, Cryptography, Linux(Redhat), Bash Scripts, ARM, C, C++, Meteor, Assembly, MIPS R12K
This is an embedded system designed for all medical laboratories to share disease's information for a better decision about him/his illness. I earned 5,000$

2014 **HIDM - Hijack Internet Download Manager**
Project Skills: Socket Programming, Linux, Tun/Tap Linux driver developing, Qt-framework, Linux, Filesystem management, Linux firewall, C, C++, Flex-Bison parser scanner, HTTP protocol handling, HTTP Authentication
HIDM tool helps people to boost their internet speed in the public network or public WiFi. Just for Fun!

2014 **Developing CPU board of Hitachi Automatic Analyzer 917 series**
Project Skills: ARM, C, C++, Motorola 68K, Qt framework, Test, Computer Architecture, Assembly, Java
This project has been done for American Hitachi Reseller: Diamond Diagnostics Corporation.

2014 **Securing and improving Shahid Beheshti University core network**
Project Skills: CISCO iOS, HUAWEI, Cryptography, PHP, Web-App, JavaScript, Vulnerability Scanning, Exploit Design, Linux, Network Programming
This project defined by the IT/Network department under the supervision of Dr. Abbaspor (IT president).

2013 **Design & implementation of Rocketport's driver**
Project Skills: x86 Assembly, PCI-Express Driver, Kernel Development, Kernel Module
In this project, we develop a custom driver in order to gain higher performance and new functionality. I earned 3,500$

2012 **JHOSX operating system**
Project Skills: x86 Assembly, C, C++, yasm, nasm, gcc, Link script development, LBA and CHS addressing, Filesystem, DDR driver, VGA driver, terminal, calculator, CPU scheduling

2011 **SecNetLister - Listing network secret data**
Project Skills: Qt-framework, Network Packet capturing, Network programming, Network parser, C, C++, aircrack-ng, Linux, Bash scripting
SecNetLister help users to capture the username and password text in clear-text based lines(including WiFi and Ethernet). Just for fun!

2008 **Chemistry software for high school**
Project Skills: MultiMedia Builder, Java
This application simulates a chemistry laboratory and the students can work with lab tools.

Job / Career

2019 - 2020 **Payame-Noor University**
Lecturer Teacher
I was a adjunct professor at Payame-Noor University. In the fall and spring, my courses were operating system, principles of algorithms, and computer security.

2016 - 2019 **Parsa Sharif Research Institute**
I was research scientist under supervision of Professor Ali Jahanian.

2013 - 2015 Shahid Beheshti IT Department
I had done most security analysis of university network for the IT department.

2012 - 2016 Pars Ideal System - IT Security
I was the director of IT & Software engineering department in this company.

Courses Lectured

2016 Subscriber identity module security analysis
Ministry of Communication & Information Technology - Security IT
15 Session

2016 Introduction to cryptography and practical side-channel attack
Shahid Beheshti University - Computer Science & Engineering Department
10 Session

2015 Operating system lab
Shahid Beheshti University - Computer Science & Engineering Department
18×4 Session for 4 group

2015 Introduction to Information Security Management System (ISMS)
Shahid Beheshti University - IT Staff Department
20 Session

2015 Introduction to computer security
Shahid Beheshti University - IT Staff Department
20 Session

2015 Introduction to Linux & computer security
Shahid Beheshti University - eLearning Department
20 Session

2014 Operating system lab
Shahid Beheshti University - Electrical Engineering & Computer Science Department
19 Session

Sessions & Workshops

2017 Security-aware programming in PHP
Shahid Beheshti University - Computer Science & Engineering Department
1 Session

2015 Architecture-aware programming in C
Shahid Beheshti University - Computer Science & Engineering Department
2 Session

2015 SSL & TLS vulnerabilities
Shahid Beheshti University - Mathematical Department
1 Session

2015 Practical Xilinx Spartan6 bit-stream hacking
Shahid Beheshti University - Computer Science & Engineering Department
5 Session

2014 Developing safe & secure embedded system for real-time applications
Shahid Beheshti University - Computer Science & Engineering Department
8 Session

2013 **Integration Qt with ARM processors!**
Shahid Beheshti University - Computer Science & Engineering Department
6 Session

2013 **Qt network programming**
Shahid Beheshti University - Computer Science & Engineering Department
3 Session

Teaching Assistants

Spring, 2017 **Computer & network security [PhD & Master Course]**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Maghsoud Abbaspour

Spring, 2017 **Wireless mobile networks [PhD & Master Course]**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Mona Ghassemian

Spring, 2015 **Computer & network security [PhD & Master Course]**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Maghsoud Abbaspour

Fall, 2015 **Operating system laboratory**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Hadi Tabatabaei

Fall, 2014 **Operating systems**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Mohsen Ebrahimi Moghadam

Spring, 2013 **Computer networks**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Mona Ghassemian

Spring, 2013 **Operating systems**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Mohsen Ebrahimi Moghadam

Spring, 2013 **Machine language & assembly programming**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Ahmad Mahmoudi Aznaveh

Fall, 2013 **Computer networks**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Mona Ghassemian

Fall, 2013 **Computer architecture**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Farshad Safaei

Spring, 2011 **Machine language & assembly programming**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Ahmad Mahmoudi Aznaveh

Spring, 2011 **Computer basic programming**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Ahmad Mahmoudi Aznaveh

Spring, 2011 **Machine language & assembly programming**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Ahmad Mahmoudi Aznaveh

Fall, 2011 **Advanced programming**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Azadeh Mansouri

Fall, 2011 **Computer basic programming**
Shahid Beheshti University - Computer Science & Engineering Department
Prof. Ahmad Mahmoudi Aznaveh

Computer Skills

Software Programming:
C[master], C++[master], Java[good], Python[good], Perl[good], C#[good], Assembly(Intel syntax)[master], Assembly(AT&T syntax)[master], MIPS & ARM (Assembly)[master], Ruby[good], PHP[master], HTML[master], Javascript[good], jQuery [good], CSS[master], LaTeX[master], Mathematica[basic], MATLAB[good], Objective-C[good], TCL[good], nesC[good], CUDA[basic], OpenCL[master], OpenGL[good], Delphi[basic], Basic[basic], Pascal[basic], Ada[basic]

Hardware Programming:
SystemC[good], VHDL[master], Verilog[master], HSPICE[master], SystemVerilog[good]

Operating system:
Mac OS X[master], Microsoft Windows[good], Ubuntu/Debian[master], Suse/openSuse [good], RedHat/CentOS[master], Fedora[good], BSD[good]

Database system:
MySQL[good], SQL Server[good], SQLite[basic], PostgreSQL[basic]

Version control:
Subversion[good], Git[master], CVS[good]

IDE/Editor:
Eclipse[master], Visual Studio[basic], Xcode[master], QtCreator[master], NetBeans [good], VIM[master], Sublime[master], TexStudio[master], Xilinx ISE[good], Model-Sim[master], HSPICE-Synopsys[master], CoIDE[master], Keil uVision[good]