Faezeh Kalantari

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Educational Background

PhD in "Computer Science": August 2016 to present.

Arizona State University (ASU), Arizona, US.

Active Research Topic: Context Sensitive Injection Detection and prevention in Web Applications.

Supervisor: *Dr. Adam Doupè.*

Relevant Coursework:

- Implementation of a tool to simplify flag retrieval in a class *CTF* as a project for **Software Security** course (Python).
- Implementation of a command-line utility to deploy *IPSec protocol* in *SDN* networks as a project for **Advanced Computer Networks** course (Python).

M.Sc. in "Information Security-IT Engineering": September 2013- February 2016

Amirkabir University of Technology (Tehran Polytechniqe), Tehran, Iran

Title: Detection of logic vulnerabilities in web-based applications using behavioral fuzzing methods.

Supervisor: *Dr. Hamidreza Shahriari.*

Relevant Coursework:

- *Web penetration testing*, *Static analysis* of programs (using tools like PIXY, RIPS, …), *Malware analysis* (using IDAPro, DependencyWalker, ProcessExplorer and OllyDbg), Running experiments on *memory corruption attacks*, *Dynamic Analysis* of programs (using symbolic execution and fuzzing) in **Vulnerability Analysis** course.
- Configuring *SELinux* on fedora to prevent a buffer overflow attack, configuring an *SSO* protocol called *JOSSO* in **Secure Computer Systems** course.
- Deploying *DARPA* dataset in *SNORT* and analysis of a SIEM called *OSSIM* in **Intrusion Detection Systems** Course.
- Differential cryptanalysis of a DES-like cryptosystem in **Cryptography** course (c++).
- Implementation of a voting protocol in **Security Protocols** course (Java).

B.Sc. in "Hardware-Computer Engineering' September 2009-September 2013

Amirkabir University of Technology (Tehran Polytechniqe), Tehran, Iran

Title: Breaking of **SHA-1** Hashing algorithm implementation on **FPGA boards**

Supervisor: *Dr. Hamidreza Zarandi*

Research Interests

- **Web application vulnerability analysis**
- **Static program analysis**
- Network security

Technical Skills

Programming: Python, C, C++, Java, Assembly, VHDL, Verilog
Operating Systems: Windows, Linux, MAC
Network Tools: WireShark, Packet Tracer
Intrusion Detection: Snort, OSSIM
Vulnerability Analysis: Kali Linux Tools, IronWasp, …
Database: Xampp, Oracle

Experiences

- **Development team of UCSB capture-the-flag competition**: Helped implement a cloud-based version of the International Capture the Flag (iCTF) competition, allowing educators to more easily host their own CTF competitions. Used *Ansible, Vagrant, Amazon EC2*, and *Python* for the implementation and deployment. October 2016- March 2017
- **Research Assistant at SEFCOM lab**, Arizona State University. August 2016 up to now.
- **Information Assurance Course Teaching Assistant**, Arizona State University. Fall 2017.
- **Object-oriented programming and data structures (in Java language) Course Teaching Assistant**, Arizona State University. Spring 2017.
- **Research Assistant at Security Analysis Lab**, Amirkabir University of Technology. September 2013- February 2016.
- **Discrete Mathematics Teaching Assistant**, Amirkabir University of Technology. Spring 2015.
- Passed **Introduction to Penetration Testing and Advanced Penetration Testing** laboratory. Fall 2013 & Fall 2015.
- Passed **Networks Security** laboratory. Spring & Fall 2015.
- Passed **Computer Hacking Forensic Investigator (CHFI)** laboratory. Spring 2015.
- **Computer Architecture Lab Instructor,** Amirkabir University of Technology. February 2014- May 2016.
- **Intern** at Iran Telecommunication Research Center (ITRC), **Field:** Security Assessment Methodologies and Web Application Penetration Testing. Summer 2012.

Publications

- Erik Trickel, Francesco Disperati, Eric Gustafson, **Faezeh Kalantari**, Mike Mabey, Naveen Tiwari, Yeganeh Safaei, Adam Doupé, and Giovanni Vigna, "*Shell We Play A Game? CTF-as-a-service for Security Education*," *in Proceedings of the USENIX Workshop on Advances in Security Education (ASE)*, Vancouver, CA, August 2017.

Honors

- Member of **GHC review committee** for security and privacy track, 2019.
- Member of **IEEE Security and Privacy's Student Program Committee**, December 2018.
- Achievement of "*Security '18 Diversity Grants"* to attend *USENIX Security Symposium*, August 2018.
- Achievement of "*CyberW travel grant"* to attend *ACM CCS* conference, October 2017.
- Honorary Admission for Graduate Study Accepted as a Talented Student for graduate studies in Amirkabir University of Technology respectively without participating in the University Entrance Exam, August 2013.
- Ranked Among top 0.2 % in The National Entrance Exam for Universities and Colleges in Iran among almost 300,000 Participants, July 2009.