

AHMED TAMRAWI

Love to Learn and Teach, Team Leader, and all about Software Security

GET IN TOUCH WITH ME

Mobile

(059) 280 89 50

Email

ahmedtamrawi@gmail.com

+ EMPLOYMENT

EnSoft Research & Development Engineer

- Being a part of the development of **Atlas**, a platform for program comprehension, verification and analysis for multiple languages.
- Being a part of the development of **Modelify**, a platform for converting C code to Matlab Simulink models.
- Developed a scalable Linux verification framework for lock/unlock pairing and memory-leak analysis, resulting on (>80) confirmed bugs.

Yarmouk University Assistant Professor – Computer Engineering

- Taught Numerical Analysis for Engineers, Introduction to Programming and Operating Systems Concepts courses.
- Developed visually appealing new material and presentations and engaged students in a fun and motivating class environment.
- Being a member of many of the testing committees for senior design projects and internships.
- Held one-on-one meetings with students at each major milestone of the course to assist their understanding and solve any problems.

Amazon Software Development Engineer

- Developed a web service to compute the accuracy of warehouse shipment forecast service by comparing the forecast data with the actual warehouse shipment data for millions of shipments. The developed web service is currently running live.
- Developed a dashboard to assist decision makers and research scientists to explore the shipment data visually.

+ Recent Publications

- A. Tamrawi, S. Kothari. **Projected Control Graph for Computing Relevant Program Behaviors**. (Science of Computer Programming Journal 2018)
- S. Kothari, P. Awadhutkar, A. Tamrawi, J. Mathews. **Modeling Lessons from Verifying Large Software Systems for Safety and Security**. (WSC 2017)
- A. Tamrawi, S. Kothari. **Projected Control Graph for Accurate and Efficient Analysis of Safety and Security Vulnerabilities**. (APSEC 2016)
- S. Kothari, P. Awadhutkar, A. Tamrawi. **Insights for Practicing Engineers from a Formal Verification Study of the Linux Kernel**. (FVPE 2016).
- S. Kothari, A. Tamrawi, J. Saucedo, J. Mathews. **Let's Verify Linux: Accelerated Learning of Analytical Reasoning through Automation and Collaboration**. (ICSE 2016).
- S. Kothari, A. Tamrawi, J. Mathews. **Human-Machine Resolution of Invisible Control Flow**. (ICPC 2016).
- A. Tamrawi, S. Kothari, J. Mathews. **Rethinking Verification: Accuracy, Efficiency and Scalability through Human-Machine Collaboration**. (ICSE 2016)
- A. Tamrawi, H. Nguyen, H. Nguyen and T. Nguyen. **Build Code Analysis with Symbolic Evaluation**. (ICSE 2012)

+ EDUCATION

- AUG 2016 **Computer Engineering – PhD**
Electrical and Computer Engineering Department
Iowa State University
Program Analysis, Security, and Verification
Thesis: "Evidence-Enabled Verification for the Linux Kernel"
- AUG 2011 **Computer Engineering – MSc**
Electrical and Computer Engineering Department
Iowa State University
Program Analysis, Data Mining, Machine Learning
Thesis: "Fuzzy set and cache-based approach for bug triaging"



+ TECHNICAL SKILLS

	average	good	skilled
C/C++, C#, JAVA	●●●●●		
Full Stack Development	●●●●●		
Git, SVN	●●●●●		
Software Build	●●●●●		
Software Testing	●●●●●		

+ PROFESSIONAL SKILLS

	average	good	skilled
Research & Analytics	●●●●●		
Written & Verbal Com	●●●●●		
Technology	●●●●●		
Presentation Skills	●●●●●		
Project Management	●●●●●		
Leadership	●●●●●		
Learning Curve	●●●●●		
Object-Oriented Design	●●●●●		
Problem Solving	●●●●●		
Agile Development	●●●●●		
Algorithm Design	●●●●●		

+ GRANTS

- + **DARPA STAC** (\$4,648,672)
Researcher on Resource Usage Vulnerability Identifier (RULER).
- + **DARPA APAC** (\$4,137,198)
Researcher on Comprehension-Driven Program Analysis (CPA) for Malware Detection in Android Phones.

+ PROFESSIONAL HIGHLIGHTS

- + >80 security bugs reported and confirmed in the Linux kernel. Bugs involve: memory leaks and synchronization problems.
- + Experience in scalable static program analysis for detecting security vulnerabilities and malware in mobile application.
- + Experience in technical writing, documentation, presentation, and more.
- + Proven ability to collaborate across different departments and teams to release products.
- + Passion for keeping up with emerging technology and the latest breakthroughs.
- + Good experience in object-oriented design and project planning and design.
- + Good experience in data mining and topic analysis via machine learning.

AUG 2016 – PRESENT

JAN 2017 – JAN 2018

MAY 2016 – AUG 2016