# YaraAwad

PhD Candidate


## Contact

*awadyn@bu.edu*

## Git

github.com/awadyn


## Education

Sept 2017 - Present
**PhD in Computer Science** — Boston University, Boston, MA, USA
**Adviser**: Professor Jonathan Appavoo
**Lab**: Scalable Elastic Systems Architecture - Programmable Smart Machines
**Research Direction:** The design and implementation of general-purpose systems that 1) recognize structure and redundancy in general-purpose computation and 2) exploit alternative micro-architectures in order optimize-out said redundancy, thereby transforming the ”general-purpose” to ”special-purpose” in its own turf.
**Graduate-Level Coursework:** Seminar on Programmable Smart Machines, Advanced Algorithms, Cryptography, Operating Systems, Distributed Systems, Formal Methods and Verification, Computational Complexity

Sept 2012 - May 2017
**BS in Computer Science** — American University of Beirut, Beirut, Lebanon
**Relevant Coursework:** Operating Systems, Computer Architecture, Combinatorial Structures, Machine Learning, Neurobiology, Probability and Statistics, Engineering Electronics

Sept 2014 - Dec 2014
**Exchange Program** — Boston University, Boston, MA, USA

Sept 2009 - June 2012
**High School Diploma** — Abdul-Aziz International School, Riyadh, Saudi Arabia

## Research Experience

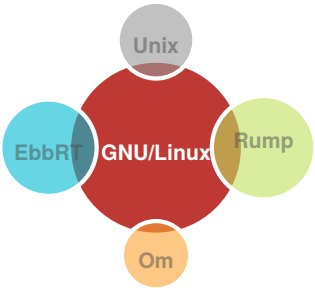
Sept 2017 - Present
**Graduate Student** — Boston University, Boston, MA
**Scalable Elastic System Architecture (SESA)**
*Discuss, survey, implement, and test systems that are built to serve in the context of today's versatile and large application-level workloads in an elastic, durable, memory-aware, and energy-aware fashion.*

Sept 2017 - Present
**Graduate Student** — Boston University, Boston, MA
**Programmable Smart Machines Lab (PSML)**
*Incorporate ideas related to learning, signal processing, and neuro-morphic computation into the building and design of systems that can learn and evolve in order to better serve a non-deterministic external world.*

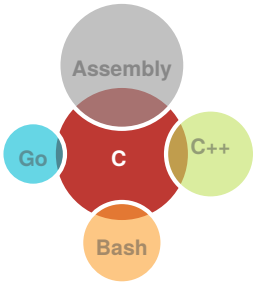
## Interests

**Computer Systems and Architecture**
**Hybrid Models of Computation**
**Smart Systems**
**Energy Proportional Computation**
**Neuromorphic Computing**

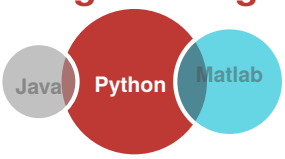
**Familiar Systems**



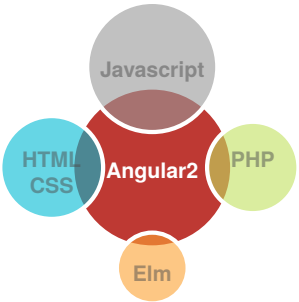

**System Programming**




**Other Programming**




**Web Development**




Feb 2017 - July 2017 **Researcher** American University of Beirut, Beirut, Lebanon
*Security Lab*
**Modeling Malware as a Language**
*Designed a new approach to static malware analysis that treats malware analysis as natural language analysis through modeling malware as a language and assessing the feasibility of finding semantics in instances of that language.*

Jan 2015 - May 2015 **Visiting Researcher** Boston University, Boston, MA
*Programmable Smart Machines Lab (PSML)*
**Automatically Scalable Computation (ASC)**
*Studied a model system that takes an alternative approach to automatic parallelization through programmable tunnelling, by means of predictive partitioning of a program's trajectory and speculative execution of that trajectory's partitions.*

Jan 2014 - April 2014 **Undergraduate Researcher** American University of Beirut, Beirut, Lebanon
*Organic Chemistry Lab with Professor Kamal Bouhadir (American University of Beirut)*
*Synthesized non-conjugated dienes attached to nucleobases and studied their potential as biosensors in therapeutic applications.*

## Professional Development

July 2020 **ATC** Virtual
*attendee*

Oct 2018 **OSDI** Carlsbad, CA
*attendee*

May 2018 **ICC-IEEE** Kansas City, MO
*presenter: Modeling Malware as a Language*

Oct 2017 **Massachusetts Open Cloud (MOC) Workshop** Boston University, Boston, MA
*attendee*

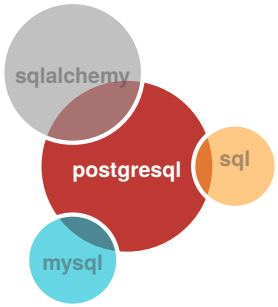
Jan 2016 **Winter School for Computational Neuroscience** American University of Beirut, Beirut, Lebanon
*attendee and project presenter*

May 2015 **Boston University Symposium on Physics, Mathematics, and Neuroscience of Cortical Function** Boston University, Boston, MA
*attendee*

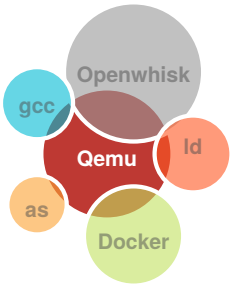
## Teaching Experience

Fall 2018, Spring 2019, Summer 2019, Spring 2020 **Teaching Fellow** Boston University, Boston, MA
*CS210: Computer Systems*
Introduces fundamental hardware and software concepts used in systems programming.

## Database Management Systems and Languages




## Tools/Platforms




## Natural Languages

English ★★★★★
Arabic ★★★★★
French ★☆☆☆☆

# Work Experience

Sept 2016 - May 2017 **Software Engineer** Interactive Life Inc., Beirut, Lebanon
*Interactive Life Inc is a startup that offers a mobile application publishing platform that anyone can use to create a mobile application.*

Sept 2013 - Aug 2014 **Dancer** Sima Dance Company, Beirut, Lebanon
*Sima Dance Company is a Syrian contemporary and jazz dance company.*

# Publications

James Cadden, Thomas Unger, Yara Awad, Han Dong, Orran Krieger, and Jonathan Appavoo. 2020. SEUSS: Skip Redundant Paths to Make Serverless Fast. In Proceedings of the Fifteenth European Conference on Computer Systems (EuroSys '20).

Y. Awad, M. Nassar and H. Safa, "Modeling Malware as a Language," 2018 IEEE International Conference on Communications (ICC), Kansas City, MO, 2018

# Archive

Dong, H., Arora, S., Awad, Y., Unger, T., Krieger, O., Appavoo, J. Slowing Down for Performance and Energy: An OS-Centric Study in Network Driven Workloads.

# Honors & Awards

May 2020 **College of Arts and Sciences Outstanding Teaching Award** Boston University, Boston, MA

May 2017 **Mark Sawaya Excellence Award** American University of Beirut, Beirut, Lebanon

April 2014 **Boston University Exchange Scholarship** American University of Beirut, Beirut, Lebanon

Dec 2013 **Arab's Got Talent: First Place Act** Beirut, Lebanon