

Reza Karimi

Email: rkarimi[at]emory.edu

Address: 400 Dowman Dr #N411, Atlanta, GA 30322

EDUCATION

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- Emory University**, Atlanta, Georgia, United States May 2021
Doctor of Philosophy in Computer Science
Advisor: Ymir Vigfusson
Research Area: Distributed Systems, Caching Algorithms and Systems.
- Iran University of Science and Technology**, Tehran, Iran Mar 2015
Master of Science in Computer Science - Distributed Systems
Thesis: An Atomic-Multicast Middleware for Mobile Computing Environments.
- University of Isfahan**, Isfahan, Iran Sep 2012
Bachelor of Science in Computer Science - Software Engineering
Project: Design and Implementation of a Task Scheduler for Android OS.
- National Organization for Development of Exceptional Talents**, Iran Sep 2008
Middle-school, Highschool, Preuniversity Diploma in Mathematics and Physics

SKILLS

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| Implementation Skills | Expert in C/C++, Python, Network Programming, Linux Kernel Programming, Shell Script, SQL, Java, PHP, JavaScript, HTML, CSS |
| Research Experience | Distributed Systems, Systems, Event-Processing |

NOTABLE PROJECTS

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- Bandwidth-aware Caching for Hybrid NUMA Memory Architectures** Jun 2018 - Present
· A work in progress, aiming to use bandwidth information to achieve effective cache placement in NUMA systems.
- Firehose: Highly Scalable Publish-Subscribe** 2017-2018
· Designed and implemented a scalable, high-throughput and low-latency publish-subscribe platform.
- MimirCache: A Cache Analysis Framework** 2016
· Collaborated in implementation of an integrated cache analysis platform which makes the process of design, development and evaluation of cache policy algorithms faster and more convenient.
- AM2Cast: Atomic-Multicast Middleware for Mobile Computing Environments** 2015
· Designed and implemented an atomic-multicast middleware adapted to characteristics of mobile computing environments providing a robust and easy-to-use messaging platform despite the complexity and unreliable nature of the target environments.

EXPERIENCES

Research Intern , INESC-ID, Lisbon, Portugal	Jun 2018 - Present
Graduate Research Assistant , SimBioSys Lab, Emory University	Aug 2016 - Present
Teaching Assistant , Systems Programming, Emory University	Fall 2017
Teaching Assistant , Introduction to Computer Science, Emory University	Fall 2017, Spring 2017
Graduate Research Assistant , Distributed Systems Lab, Iran U of Science and Technology	2012 - 2016
Teaching Assistant , Compilers Design and Implementation, University of Isfahan	Spring 2012
Instructor , Computer Graphics Workshop, University of Isfahan	Spring 2012

PUBLICATIONS

- R. Karimi, G. Chockler, Y. Vigfusson , “Firehose: Highly Scalable Publish-Subscribe” in USENIX Symposium on Networked Systems Design and Implementation (NSDI), Boston, MA, USA, 2019. [In Submission]
- J. Yang, R. Karimi, T. Saemundson, A. Wildani, Y. Vigfusson , “Mithril: mining sporadic associations for cache prefetching.” in ACM Symposium on Cloud Computing (SoCC), Santa Clara, CA, USA, 2017.
- J. Yang, R. Karimi, A. Wildani, Y. Vigfusson, “A Simple Cache Prefetching Layer Based on Block Correlation” in USENIX Conference on File and Storage Technologies (FAST), Santa Clara, CA, USA, 2017. [Poster]
- J. Yang, R. Karimi, Y. Vigfusson , “Mithril: Mining block correlation for cache prefetching” in USENIX Symposium on Operating Systems Design and Implementation (OSDI), Savannah, GA, USA, 2016. [Poster]
- R. Karimi, S. Fatholahzadeh, M. Sharifi, A. Paschke, et al., “DEBS2015 Grand Challenge: Parallel Event Processing on Unbound Streams with Multi-Step Windowing,” in ACM Conference on Distributed Event-Based Systems (DEBS), Oslo, Norway, 2015.

HONORS AND AWARDS

Awarded Research Grant on “Bandwidth-aware Caching in Hybrid NUMA Systems” INESC-ID, Lisbon, Portugal.	Jun 2018
Awarded PhD Scholarship , Emory University, Atlanta, GA.	Aug 2016
Ranked top 0.2% among participants in nationwide university entrance exam for MSc degree in Computer Science and Software Engineering	2012
Ranked top 2% among participants in nationwide university entrance exam for BSc degree in Science and Engineering	2008
Accepted for High School Education in National Organization for Development of Exceptional Talents	2004
Accepted for Middle School Education in National Organization for Development of Exceptional Talents	2001

COMMUNITY ENGAGEMENT

External Reviewer ACM Symposium on Cloud Computing (SoCC), Carlsbad, CA.	2018
Volunteer Instructor, “Unveiling the Internet” Event Atlanta Science Festival, Atlanta, GA.	2018
External Reviewer ACM Symposium on Cloud Computing (SoCC), Santa Clara, CA.	2017
Volunteer Instructor, “Unveiling the Internet” Event Atlanta Science Festival, Atlanta, GA.	2017

ADDITIONAL SKILLS AND INTERESTS

Hobbies: Hiking, Biking, Camping, Movies, Photography

Languages: Fluent in *English*, Native in *Persian (Farsi)*