

# Reza Karimi

Email: rkarimi[at]emory.edu

<http://0xreza.com>

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

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## EDUCATION

- 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.*
- Isfahan University**, 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

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## SKILLS

- 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, Machine Learning, Data Mining

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## NOTABLE PROJECTS

- Bulldozer: Scalable Pub-Sub to Support Trillions of Topics** 2017-2018  
· Designed and implemented a scalable, high-throughput and low-latency publish-subscribe platform which supports trillions of topics.
- 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.

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## EXPERIENCES

- 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, Isfahan University Spring 2012
- Instructor**, Computer Graphics Workshop, Isfahan University Spring 2012

## PUBLICATIONS

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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.

## COMMUNITY ENGAGEMENT AND LEADERSHIP EXPERIENCE

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**Volunteer Instructor for “Unveiling the Internet Event”** 2018  
Atlanta Science Festival, Atlanta, GA.

**External Reviewer** 2017  
ACM Symposium on Cloud Computing (SoCC), Santa Clara, CA.

**Volunteer Instructor for “Unveiling the Internet Event”** 2017  
Atlanta Science Festival, Atlanta, GA.

**Lead Volunteer Trail Keeper** 2014 - 2016  
Maintained several hiking trails around Tehran, Iran.

**Volunteer Web Designer** 2013 - 2014  
Designed websites for several charity organizations in Iran.

## ADDITIONAL SKILLS AND INTERESTS

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**Hobbies:** Hiking, Biking, Camping, Movies, Photography

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