

# VIMUTH FERNANDO

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## EDUCATION

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<b>PhD, Computer Science</b> University of Illinois at Urbana Champaign Urbana, IL, USA Current GPA - 4.00/4.00	2016 - 2021 (expected)
<b>MSc, Computer Science and Engineering</b> University of Moratuwa, Katubedda. Sri Lanka	August 2015 - August 2016
<b>BSc, Computer Science and Engineering</b> First Class University of Moratuwa, Katubedda. Sri Lanka	August 2010 - August 2015

## PROJECTS

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### Adapting Programs for Wireless On-Chip Communication

Wireless on-chip communication is a novel way to tackle the problem of scaling in shared memory platforms. I am working on automatically identifying communication patterns suitable for wireless communication, restructuring programs to efficiently use wireless communications, and developing tools for programmers to easily use the wireless capabilities in an architecture.

### Tracking the effect of approximation through program execution

Errors introduced into programs through approximations (and errors) can cause the program state to diverge from the exact execution. Tracking such effects through program execution can help developers better understand how such errors propagate to the final output of the program.

## WORK EXPERIENCE

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<b>University of Illinois at Urbana Champaign</b> <i>Research Assistant</i> <i>Advisor : Sasa Misailovic</i>	August 2016 - Current
<b>University of Moratuwa</b> <i>Research Assistant</i> <i>Advisor : Sanath Jayasena</i> <i>Topic : Autotuning Multi-tiered Applications</i>	August 2015 - August 2016
<b>Apache Software Foundation</b> <i>Intern</i> <i>Contributor to Google Summer of Code 2014</i> <i>Worked on evaluating and modularizing the build system for Apache Pig</i>	April 2014 - August 2014
<b>WSO2</b> <i>Software Engineering Intern</i> <i>WSO2 Private PaaS Team</i> <i>Worked on building a centralized logging and metering system for distributed containers</i>	Nov 2013 - Feb 2014

## PUBLICATIONS

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**Vimuth Fernando**, Antonio Franques, Sergi Abadal, Sasa Misailovic, Josep Torrellas, Replica: A Wireless Manycore for Latency-Critical Data, *24th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, 2019

**Vimuth Fernando**, Sanath Jayasena. Autotuning Multi-tiered Applications for Performance, *12th IEEE International Conference on Industrial and Information Systems (ICIIS)*, 2017

**Vimuth Fernando**, Milinda Fernando, Tharindu Rusira and Sanath Jayasena. Enhancing X10 performance by auto-tuning the managed java back-end, *2016 Sixteenth International Conference on Advances in ICT for Emerging Regions (ICTer)*, Negombo, 2016

## PRESENTATIONS

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Poster - Auto-tuning Multi-tiered Applications for performance  
*International Symposium on Code Generation and Optimization 2016 (CGO)*  
*Barcelona, Spain*

## AWARDS AND ACHIEVEMENTS

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**ACM Student Research Competition - 2nd Runner Up**  
*Graduate Student Category*  
*International Symposium on Code Generation and Optimization 2016 (CGO)*

**Prof. V K Samaranayake Research Grant**  
*Awarded by LK Domain Registry, Sri Lanka*

**Travel Grant**  
*PLMW at PLDI'17*

**Dean's List**  
*University of Moratuwa*  
*2010, 2011, 2013, 2014*

## OTHER EXPERIENCE

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**Student Volunteer** at SC'15 (The International Conference for High Performance Computing, Networking, Storage and Analysis) Austin, Texas

**Teaching Assistant** at University of Moratuwa  
*Operating Systems (CS2042), Computer Networks (CS 3032), Concurrent Programming (CS4532)*

**Attendee** at Oregon Programming Languages Summer School 2017 (OPLSS'17)