

VIMUTH FERNANDO

vimuth.github.io

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RESEARCH INTERESTS

Programming languages, program analysis, and software engineering.

EDUCATION

PhD, Computer Science

August 2016 - Present

University of Illinois at Urbana Champaign, Urbana, IL, USA

Advisor - Prof. Sasa Misailovic

MSc, Computer Science and Engineering

August 2015 - August 2016

University of Moratuwa, Katubedda, Sri Lanka

Advisor - Prof. Sanath Jayasena

BSc, Computer Science and Engineering

August 2010 - August 2015

First Class

University of Moratuwa, Katubedda, Sri Lanka

PUBLICATIONS

Keyur Joshi, **Vimuth Fernando**, Sasa Misailovic, Aloe: Verifying Reliability of Approximate Programs in the Presence of Recovery Mechanisms, *International Symposium on Code Generation and Optimization. (CGO)*, 2020

Vimuth Fernando, Keyur Joshi, Sasa Misailovic, Verifying Safety and Accuracy of Approximate Parallel Programs via Canonical Sequentialization, *34th ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages and Applications. (OOPSLA/SPLASH)*, 2019

Vimuth Fernando, Keyur Joshi, Darko Marinov, Sasa Misailovic, Identifying Optimal Parameters for Randomized Approximate Algorithms, *Workshop on Approximate Computing Across the Stack (WAX) (Collocated with PLDI)*, 2019

Farah Hariri, August Shi, **Vimuth Fernando**, Suleman Mahmood, Darko Marinov, Comparing Mutation Testing at the Levels of Source Code and Compiler Intermediate Representation, *12th IEEE International Conference on Software Testing, Verification and Validation (ICST)*, 2019

Keyur Joshi, **Vimuth Fernando**, Sasa Misailovic, Algorithmic Profiling for Randomized Approximate Programs, *41st ACM/IEEE International Conference on Software Engineering (ICSE)*, 2019

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

WORK EXPERIENCE

University of Illinois at Urbana Champaign

August 2016 - Present

Research Assistant

Advisor : Sasa Misailovic

University of Moratuwa

August 2015 - August 2016

Research Assistant

Advisor : Sanath Jayasena

Topic : Autotuning Multi-tiered Applications

Google Summer of Code

April 2014 - August 2014

Intern

Contributor to Apache Software Foundation

Worked on evaluating and modularizing the build system for Apache Pig

WSO2

Nov 2013 - Feb 2014

Software Engineering Intern

WSO2 Private PaaS Team

Worked on building a centralized logging and metering system for distributed containers

PRESENTATIONS

Guest Lecture - Replica: A Wireless Manycore for Latency-Critical Data

CS 526, UIUC, Spring 2019

Talk - Verifying Safety and Accuracy of Approximate Parallel Programs via Canonical Sequentialization

Midwest Programming Languages Summit 2019

Poster - Auto-tuning Multi-tiered Applications for performance

International Symposium on Code Generation and Optimization 2016 (CGO)

AWARDS AND ACHIEVEMENTS

ACM SIGPLAN grant for OOPSLA 2019

Travel Grants - Midwest PL Summit 2019

PLMW at PLDI'17

ACM Student Research Competition - 2nd Runner Up

Graduate Student Category

International Symposium on Code Generation and Optimization 2016 (CGO)

Prof. V. K. Samaranyake Research Grant

Awarded by LK Domain Registry, Sri Lanka

Dean's List - University of Moratuwa

2010, 2011, 2013, 2014

OTHER EXPERIENCE

Co-organized the Brett Daniel Software Engineering Seminar, UIUC, Spring 2019

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)

Attended Oregon Programming Languages Summer School 2017 (OPLSS'17)