

Saeed Taheri

50 S. Central Campus Drive Room 2180, Salt Lake City, UT 84112

🌐 staheri.github.io ✉ staheri@cs.utah.edu 📞 +1 512 501 9013

EDUCATION

University of Utah

PhD in Computer Science

Dissertation Topic: HybridDebugger: A Framework for Debugging Large Scale Scientific Applications

Salt Lake City, UT

Exp. Graduation: Aug 2020

Texas State University

M.S. in Computer Science

Thesis Topic: A Tool for Automatically Suggesting Source-Code Optimizations for Complex GPU Kernels

San Marcos, TX

2012-2015

Shiraz University

B.S. in Computer Engineering(software)

Shiraz, Iran

2006-2011

RESEARCH INTERESTS & TECHNICAL EXPERTISE

HPC Correctness, Programming Languages, Floating Point, Data Analysis and Visualization

Parallel/Distributed Programming Languages: MPI, OpenMP, Pthreads, Intel TBB, Intel PIN, CUDA, GO

HPC-Related: Spark, Hadoop, SLURM, Lustre, NFS

Programming/Scripting: Bash, Python, Java, C, C++, MATLAB, MySQL, SQL Server, R

PUBLICATIONS

FMCAD'19: S. Taheri, G. Gopalakrishnan,. *Floating Point Debugging via Basic Block Tracing*. Student Forum in Formal Methods in Computer Aided Design (FMCAD), San Jose, California, October 2019.

CLUSTER'19: S. Taheri, Ian Briggs, G. Gopalakrishnan, M. Burtscher. *DiffTrace: Efficient Whole-Program Trace Analysis and Diffing*. IEEE Cluster Conference, Albuquerque, New Mexico, September 2019.

ESPT'18: S. Taheri, S. Devale, G. Gopalakrishnan, M. Burtscher. *PARLOT: Efficient Whole-Program Call Tracing for HPC Applications*. Extreme-Scale Programming Tools Workshop at Supercomputing Conference, Dallas, Texas, November 2018.

PDPTA'15: S. Taheri, A. Qasem, and M. Burtscher. *A Tool for Automatically Suggesting Source-Code Optimizations for Complex GPU Kernels*. 2015 International Conference on Parallel and Distributed Processing Techniques and Applications. July 2015.

HONORS & AWARDS

Formal Methods in Computer-Aided Design FMCAD

1200\$ Travel Grant

San Jose, CA, USA

2019

IEEE Cluster Conference

500\$ Travel Grant

Albuquerque, NM, USA

2019

Supercomputing Conference Student Volunteer Program

500\$ Travel Grant

Denver, CO, USA

2017

SRI Summer School

1000\$ Scholarship & Travel Grant

Menlo Park, CA, USA

2015

Department of Computer Science Awards Day <i>Graduate Academic Excellence Award</i>	Texas State University, USA 2014
Southeast Region ACM-ICPC Programming Contest Division-2 <i>Gold Medal</i>	University of C. Florida, USA 2012
Southeast Region ACM-ICPC Programming Contest <i>Rank 7 among 51 teams</i>	University of C. Florida, USA 2012
Internal ACM-ICPC Contest <i>Gold Medal</i>	Texas State University, USA 2012
Nation-Wide Entrance Exam for M.S. Program in A.I. <i>Rank 145 among nearly 20,000 participants</i>	Shiraz University, Iran 2011
5th Annual "Break Time in University"(BTIU) Student Conference <i>Best Instructor Award</i>	Shiraz University, Iran 2010

CONFERENCES & WORKSHOPS

FMCAD'19 <i>Presenter</i>	San Jose, CA October 2019
IEEE CLUSTER <i>Presenter</i>	Albuquerque, NM September 2019
SuperComputing (SC'18) <i>Presenter</i>	Dallas, TX Nov 2018
Workshops on Languages and Compilers for Parallel Computing <i>Peer Reviewer</i>	Salt Lake City, UT Oct 2018
Workshop on Software Correctness for HPC Applications @ SC'18 <i>Peer Reviewer</i>	Dallas, TX Aug 2018
Transactions on Software Engineering (TSE) <i>Peer Reviewer</i>	IEEE Journal May 2018
SuperComputing (SC'17) <i>Student Volunteer</i>	Denver, CO Nov 2017
Architectural Support for Programming Languages and Operating Systems <i>Peer Reviewer</i>	Williamsburg, VA Sep 2017
SuperComputing (SC'16) <i>Student Volunteer</i>	Salt Lake City, UT Nov 2016

PROFESSIONAL EXPERIENCES & MEMBERSHIPS

Iranian Student Association (IrSA) <i>President</i>	University of Utah June 2018 - Current
Institute of Electrical & Electronics Engineers (IEEE) <i>Student Member</i>	University of Utah Aug 2019 - Current
Association for Computing Machinery (ACM) <i>Student Member</i>	University of Utah Aug 2016 - Current
Formal Verification Group <i>Researcher & Developer</i>	University of Utah Jan 2015 - Current
ECL (Efficient Computing Lab) <i>Researcher & Developer</i>	Texas State University Aug 2013 - Dec 2014

INFONEER(Information Engineer) Research Team*Researcher & Developer***Texas State University***Jan 2013 - Dec 2013***ACM-ICPC Programming team***Developer & Competitor***Shiraz University***Feb 2007 - Jan 2009***CERT(Computer Emergency Response Team)***Researcher***Shiraz University***Feb 2010 - Sep 2011***Student Scientific Association***Vice-President***Shiraz University***Feb 2008 - Jan 2010***Annual "Break Time in University"(BTIU) Student Conference***Co-Founder and Board Committee Member***Shiraz University***Jun 2007 - Jun 2011***"Zero & One" Magazine***Editorial Board Member***Shiraz University***Feb 2008 - May 2009***"Faryad" Social/Political Magazine***Editorial Board Member***Shiraz University***Jun 2008 - Aug 2010***"Human Rights" Workshop - 5th BTIU Conference***Presenter***Shiraz University***Jun 2010*

SELECTED PROJECTS

Neuromorphic Architecture*Fall 2017*

A comprehensive study on modern deep network frameworks (PyTorch and TensorFlow) on GPU and effect of storing convolutions locally on accuracy and efficiency.

Distributed Systems*Fall 2015*

Implemented the full algorithm of known methods in distributed platforms (MapReduce, Paxos, Consensus and Raft) in GO language.

Big Data*Fall 2015*

Implemented the IsoRank algorithm (inherited from Page-Rank algorithm) for comparing the general topology of each pair of HPC execution traces collected by ParLOT.

Parallel Computing*Spring 2013*

Implemented hybrid (CPU+GPU) Merge Sort by sorting tiled data in shared memory of GPGPU and merging data chunks using OpenMP.

Machine Learning*Fall 2012*

Implemented an Sketch Recognition algorithm using SVM by extracting HU Invariant Moments of 20000 sketches as features.

B.S. Final Project*Spring 2011*

A web-based framework using NCBI's web services to send appropriate information about different type of protein and genes upon biologists requests.

GPGPU Programming*Fall 2010*

Parallelized and implemented Sobel Image Edge Detection algorithm in CUDA using OpenCV library.

Database*Spring 2010*

Designed and Implemented an academic automation website with 3 access level and capability of registering students, teachers and advisors using PHP and MySQL.

Software Engineering*Spring 2010*

Extended my database project (academic automation) using USDP methodology, role-based authentication/authorization and interviewing department staff to form the requirements.

Computer Architecture*Fall 2008*

Designed a complete pipeline data-path with 15 MIPS instructions and complete control unit and hazard handler.

WORK EXPERIENCES

Fars Zarrin System Practical Research

Web Developer

Shiraz, Iran

Apr 2011 - Jan 2012

- Developed an interactive front-end GUI to send commercial text messages in massive scale to cell phones based on phone owners' registered P.O. code

Cheshmeh Co.

Java Developer-Intern

Shiraz, Iran

Summer 2009

- Designed a Java mobile application using J2ME Polish and BTS to locate users' cell phone based on the GSM tower service provider IDs.

TEACHING EXPERIENCES

CS4230 - Parallel Processing

Teaching Mentor

University of Utah

Spring 2018

CS3100 - Models of Computation

Teaching Mentor

University of Utah

Fall 2017

CS2308 - Foundations of Computer Science II

Teaching Assistant

Texas State University

Spring 2014

CS1428 - Foundations of Computer Science

Lab Instructor

Texas State University

Fall 2013

Discrete Mathematic, Digital Design and C++

Tutor

Texas State University

Spring 2013

Artificial Intelligence

Teaching Assistant

Shiraz University

Fall 2009

ICDL(Microsoft Office)

Teacher

Alavi Junior High School, Shiraz, Iran

Fall 2007

OTHER EXPERIENCES & HONORS

Intramural Basketball Tournament

4-time Champion

Shiraz University

2006 - 2010

"Faryad" Social/Political Magazine

Editorial Board Member

Shiraz University

2008 - 2010

Athletic Universiade Olympiad

Member of Shiraz University Basketball Team

Yazd University

2008

"Human Rights" Workshop - BTIU Conference

Presenter

Shiraz University

2010