

Sajjad Taheri

CONTACT INFORMATION

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GitHub: <https://www.github.com/sajjad>

EDUCATION

University of California, Irvine (School of ICS), Irvine, CA

P.h.D. in Computer Science

2013-2019 expected

University of Tehran (School of ECE), Tehran, Iran

B.Sc. and M.Sc. in Computer Engineering

2005-2013

PROFESSIONAL EXPERIENCES

UC Irvine, Irvine, CA

Graduate Student Researcher

Sep 2014 to present

- FPGA Acceleration of Data-flow-based Computer Vision Algorithms
- High-performance Computer Vision Processing for the Open Web Platform
- Performance Assessment of WebRTC implementations

Mozilla, Mountain View, CA

JavaScript Engineering Intern

Jun 2015 to Sep 2015

- Improved SIMD support for SpiderMonkey JavaScript engine
- Vectorization of gl-matrix library with SIMD.js

TEACHING AND MENTORING EXPERIENCES

Mentor

Google Summer of Code

Summer 2017

- Helped mentoring two students participating in Google Summer of Code program towards completing their proposed projects for OpenCV organization.

UCI International Summer Undergraduate Research

Summers 2016 and 2017

- Proposed research projects for undergraduate interns
- Supervised undergraduate students from Korean universities in completing proposed projects

Teaching Assistant

- Introduction to Computer Organization, UC Irvine
- Discrete Mathematics for Computer Science, UC Irvine
- Principles of Operating Systems, UC Irvine
- Data Structures, UC Irvine

SKILLS AND TOOLS

- **Programming Languages:** Functional: {Haskell}, Imperative: {Python, JavaScript, C/C++, Rust, and Java}
- **Software Development Productivity:** CMake, Git and GitHub
- **Hardware Design and Verification:** OpenCL, Verilog, SystemC and TCL scripting
- **Scientific:** SAT solvers and integer programming optimization toolkits
- **Machine Learning and Data Mining:** Caffe, Pytorch, Weka
- **Office Productivity:** L^AT_EX and PGF/TikZ 🐼
- **Algorithmic Programming and Problem Solving** Participated in numerous ACM ICPC events

RESEARCH INTERESTS	Programming Languages and Compilers Web Technologies	Computer Vision Acceleration
CONFERENCE PAPERS	[1] S. Taheri , J. Heo, P. Behnam, A. V. Veidenbaum, A. Nicolau, "Acceleration Framework for FPGA Implementation of OpenVX Graph Pipelines", IEEE FCCM'18. [2] S. Taheri , A. V. Veidenbaum, A. Nicolau, N. Hu, and M. Haghighat, "OpenCV.js: Computer Vision Processing for the Open Web Platform", ACM MMSys'18. [3] P. Behnam, B. Alizadeh, S. Taheri , M Fujita, "Formally analyzing fault tolerance in datapath designs using equivalence checking", ASP-DAC'16. [4] S. Taheri , L. Beni, A. V. Veidenbaum, A. Nicolau , R. Cammarota, Jianlin Qiu, Qiang Lu and M. Haghighat, "WebRTCBench: Performance Assessment of WebRTC Implementations", ACM/IEEE ESTIMEDIA'15.	
MAGAZINE ARTICLES	[5] S. Taheri , A. V. Veidenbaum, A. Nicolau, N. Hu, and M. Haghighat, "Computer Vision for the Masses: Bringing Computer Vision to the Open Web Platform", Intel Parallel Universe Magazine, April 2018 issue. Syndicated by EE Times.	
OTHER	[6] S. Taheri Bringing the Power of SIMD.js to gl-matrix, Mozilla Hacks Blog, 2015.	
PRESENTATIONS	Improving OpenVX Application Development and Optimization Process for FPGAs Systems, Intel, Santa Clara. May 2017	
SELECTED PROJECTS	<ul style="list-style-type: none">• OpenCV.js: OpenCV in JavaScript. Available at https://github.com/ucisysarch/opencvjs• SIMD.js vectorizaion for gl-matrix. Available at https://github.com/toji/gl-matrix• An optimizable compiler for PL241 language: Developed from scratch without using thrid-party libraries, includes SSA-based optimizations, linear scan register allocation, and code generation. Available at https://github.com/sajjad/pl241compiler• A benchmark for WebRTC implementations. Available at https://github.com/ucisysarch/WebRTCBench	
ACADEMIC SERVICES	Peer-reviewer for International Journal of Parallel Programming (IJPP)	
COMMUNITY SERVICES	Co-host "Static Waves" music show on KUCI radio station Fall-Winter 2016	
REFERENCES	Alex Nicolau Distinguished Professor Computer Science Department UC Irvine ✉ nicolau@ics.uci.edu	Alex Veidenbaum Professor Computer Science Department UC Irvine ✉ alexv@ics.uci.edu
	Moh Haghighat Senior Principal Engineer Intel Corporation ✉ mohammad.r.haghighat@intel.com	