Farshid Salemi Parizi

I am a Ph.D. student at the University of Washington, advised by Shwetak Patel in the Ubiquitous Computing (UbiComp) lab. My research focuses on designing novel input solutions and adaptive interfaces in virtual and augmented reality which enhance existing sensors in the environment. Specifically, I am interested in enabling high precision and low-cost sensing on everyday objects. Using my diverse skillset in signal processing, embedded system design, physical prototyping, and analog hardware design, I am always interested in tackling the most challenging research questions in human computer interaction.

PhD Candidate
Department of Electrical and Computing Engineering
University of Washington
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WEBSITE

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EDUCATION

PhD 2016 - Current
Electrical and Computing Engineering, University of Washington
Advisor: Shwetak Patel

Bachelor of Science 2012 - 2016
Electrical Engineering with Honor, Sharif University of Technology
Advisor: Ali Fotowat

HONORS & AWARDS

2016 Best Paper Nominee at IEEE RFID 2016 for *μMonitor*

2016 Awarded for the best B.Sc. thesis among all Electrical Engineering students

2014 Ranked 3rd in the 3rd Sharif Cup Open Robotics competition in computer vision

INTERNSHIP EXPERIENCE

Summer 2019-Winter 2019
Facebook Reality Labs, Redmond, WA
Research Intern

2017-current
Limit Inc., Newport Beach, CA
Consultant.
Designing a non-invasive toilet overflow preventer.

Summer 2015
Sensor Systems Laboratory, University of Washington, Seattle, WA
Research Intern. Advisor: Josh Smith
Designed an ultra-low power energy flow monitoring system, which achieves less than 1.7-microampere current draw, 94% efficiency in-situ, and high-energy flow measurement accuracy across four orders of magnitude.

PEER-REVIEWED PUBLICATIONS

P4 *AURA: INSIDE-OUT ELECTROMAGNETIC CONTROLLER TRACKING*
Farshid Salemi Parizi*, Eric Whitmire*, Shwetak Patel
(*Co-primary authors)
17th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), 2019

P3 *RoyalFlush: Non-invasive Water Level Monitoring to Prevent Toilet Overflows*
Farshid Salemi Parizi, Josh Fromm, Shantanu Deshpande, Shwetak Patel
Proceedings of the ACM 8th International Conference on the Internet of Things, *(IoT 2018)*

P2 *CapHarvester: A Stick-on Capacitive Energy Harvesting Using Stray Electric Field*
Farshid Salemi Parizi*, Manoj Gulati* **,** Eric Whitmire, Sidhant Gupta, Shobha Sundar Ram, Amarjeet Singh, Shwetak Patel
(*Co-primary authors)
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2018

P1 *μMonitor: In-situ Energy Monitoring with Microwatt Power Consumption*
Saman Naderiparizi, Aaron N.Parks, **Farshid Salemi Parizi**, Joshua R.Smith
IEEE RFID 2016 Best Paper Nominee (Top 3 papers)

PUBLISHED PATENTS

P1 *Toilet Overflow Prevention Systems and Method*
Farshid Salemi Parizi, Josh Fromm
US Patent US20180371734A1

ADVISING AND MENTORING

Masters Students

Alvin Cao (Fall 2017 – Present) – Research on doing interaction with everyday objects using RFID

Shatanu Deshpande(Fall 2017-Present)- Research on designing a non-invasive toilet overflow preventer

Undergraduate Students

Arshana Jain (Fall 2017) – UW CSE Undergrad's Program

High School Students	Maxwell Scheafer (Summer 2018) Arshana Jain (Summer 2017) Marcus Amal (Summer 2017) Rishma Murugan (Summer 2017)

TEACHING EXPERIENCE

University of Washington	CSE 475, Embedded Systems Capstone (Lead Lab Assistant for Shwetak Patel) EE 371, Design of Digital Circuits and Systems (Lead Lab Assistant for Allan Ecker)
Sharif University of Technology	Analog Electronics (CAD instructor for Fotowat Ahmady) Principals of Electronics (CAD instructor for Sharif Bakhtiar)

SKILLS

Hardware	From scratch Embedded System Development, Digital and Analog Circuits Design, Energy Harvesting, RF circuit design, Signal Processing, Capacitive Sensing Systems, FPGAs, Verilog, PCB design, 3d modeling using Solidworks.
Software	C/C++/C#, JAVA, Android, Python, Matlab, Machine Learning, Discrete and Continuous Signal Processing

SERVICE

Reviewer	ISWC 2019 UIST 2019 IEEE VR 2019 IMWUT 2019
Outreach	UW Ubicomp Lab Industry Affiliation Demo Lead: 2017 - Present UW Ubicomp Lab High School Mentorship Program: 2017 – Present Presentation to Washington state legislators about research in computer science and electrical engineering: 2017 UW College of Engineering Discovery Days 2017

REFERENCES

Shwetak Patel	shwetak@cs.washington.edu
Joshua R. Smith	jrs@cs.washington.edu
Wolf Kienzle	wkienzle@fb.com
Hrvoje Benko	benko@fb.com