

CURRICULUM VITAE – ALIREZA BAHREMAND

PERSONAL INFORMATION

Alireza Bahremand
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EDUCATION

Ph.D. Computer Engineering *Arizona State University*
Advised by Dr. Robert LiKamWa, 2019-current

M.S. Computer Engineering *Arizona State University*
Graduated Spring 2021

B.S. Software Engineering *Arizona State University*
Graduated May 2018

PUBLICATIONS

"Virtually composing and dynamically mixing complex odors"

Alireza Bahremand, Christy Spackman, Richard C Gerkin, Brian H Smith,
Robert LiKamWa
In Proc ACM CHI Smell, Taste, Touch, Temperature 2021

"Visualizing Planetary Spectroscopy through Immersive On-site Rendering"

Lauren Gold, **Alireza Bahremand**, Connor Richards, Kyle Sese, Kathryn Powell,
Scott Dickenshied, Christopher Scott Edwards, Robert LiKamWa
In Proc. IEEE VR 2021

*"Virtual & Augmented Reality Tools for Planetary Scientific Analysis & Public
Engagement"*

Alireza Bahremand, Lauren Gold, Connor Richards, Kyle Sese, Kathryn Powell,
Scott Dickenshied, Christopher Scott Edwards, Robert LiKamWa
In Proc. LPSC 2020

*"Coordinate: A Spreadsheet-Programmable Augmented Reality Framework for Im-
mersive Map-Based Visualizations"*

Aashiq Shaikh, Linda Nguyen, **Alireza Bahremand**, Hannah Bartolomea, Frank
Liu, Van Nguyen, Derrick Anderson, Robert LiKamWa
Proc. ACM AIVR 2019

*"SWISH: A shifting-weight interface of simulated hydrodynamics for haptic per-
ception of virtual fluid vessels"*

Shahabegin Sagheb, Frank Liu, **Alireza Bahremand**, Assegid Kidane, Robert
LiKamWa
In Proc. ACM UIST 2019

"GLEAM: Global Light Estimation Across Mixed Reality Devices"

Siddhant Prakash, **Alireza Bahremand**, Linda Nguyen, Robert LiKamWa
In Proc. ACM MobiSys 2019

"An Integrated Environment for Visualizing In-Situ and Orbital Planetary Data"

Kathryn Powell, **Alireza Bahremand**, Alec Gonzalez, Robert LiKamWa, Chris
Edwards
In Proc. LPSC 2019.

TECHNICAL SKILLS	<p>Programming Languages C, C#, C++, Java, JavaScript, Prolog, Python</p> <p>Tools and Frameworks Adobe Suite, ARFoundation, ARKit, ARCore, AVRdude, AWS, Git, Microsoft Mixed Reality ToolKit, NIDAQ, NodeJS, Oculus SDK, OpenCV, OpenXR, .NET, NVIDIA Cloud XR, NVIDIA Flex, REST APIs, SteamVR, Unity3D, Unity XR, Visual Studio, Vue, WebXR, XCode</p> <p>Technologies/Concepts Augmented Reality, Embedded Systems, Virtual Reality, Volumetric Data Streaming, UML Design, Web Applications</p>
SPOKEN LANGUAGES	English (primary), Farsi (proficient).
PROFESSIONAL EXPERIENCE	<p>2017-Current Research Assistant <i>ASU Meteor Studio</i></p> <ul style="list-style-type: none"> – Research Interests: Technologies that virtualize our perceptual modalities as a means of communication via mixed reality environments and hybridize our physical environment with the virtual environment. – Currently studying the systematic integration of olfactory stimuli into VR/AR environments and framework design for edge-assisted live volumetric streaming. <p>2020-Current Software Architect <i>ASU Meteor Studio, ASU Learning Futures Collaboratory, Dreamscape</i></p> <ul style="list-style-type: none"> – Developing and maintaining several production AR/VR applications that use custom APIs, datasets, hardware, and SDKs. – Managed and trained a team to develop an educational mobile augmented reality application for ASU’s Biology program and Dreamscape. – Performed Mixed Reality volumetric filming, mobile AR software development, and framework design for the ASU Fall Virtual Commencement. <p>2020-Current Independent Contractor <i>British Standards Institute, Baltu Studios</i></p> <ul style="list-style-type: none"> – Consulting, software evaluation, and software development of mixed reality telecommunications and training software for BSI. <p>2018-2020 Project Manager <i>ASU Meteor Studio, ASU Interplanetary Initiative, TEDxASU</i></p> <ul style="list-style-type: none"> – Managed portfolio and budgeting of various projects from multiple university departments (Art, Space, Engineering). – Trained multiple students from various university departments to develop VR/AR applications using Unity3D. <p>2019 XR Software Engineer Intern <i>NASA</i></p> <ul style="list-style-type: none"> – Developing XR applications for visualizing and interacting with complex CAD models and Mars habitats in VR using Unity3D. – Documenting and developing VR software frameworks to reduce cost and time for the production of VR training simulations.

2016-2018 | Undergraduate Teaching Assistant

ASU

- Wrote in-class assignments for 10 units of SER334: Operating Systems and Networks and lead online discussion forums for SER250: Microarchitecture and Computer Architecture.

EXTRACURRICULARS

2017-Current | Mentor, Judge, and Organizer

SunHacks Hackathon at ASU

- Mentored students to learn new technologies such as Full Stack Web Development, Microcontrollers, VR/AR, and Unity3D Game Development.
- Helped organize and market the largest ASU Hackathon.

2015-2018 | President

Computer Science Club at ASU

- Coordinated biweekly workshops, guest lectures, and social events for engineering students.
- Recruited 50+ students from two campuses and online.

2018-2019 | Mentor, Teaching Assistant

ASU Science and Engineering Experience, ASU AME Summer Coding Camp

- Designed workshops/tutorials for high-school summer coding camp and mentored high-school students for the AZ regional science fair.

TALKS

2021 - The Smell Engine *ACM CHI Smell, Taste, Touch Workshop*

2018-20 - XR Software Development, *ASU Hackathons*

2019 - XR Software Development, *NASA*

2018 - The Art Within AR/VR, *TEDxASU*

SCHOLARSHIPS AND
AWARDS

2019 - University Graduate Fellowship, *ASU*

2019 - University Engineering Fellowship, *ASU*

2019 - Best Demo Runner Up, *ACM MobiSys*

2019 - Student Travel Award, *ACM MobiSys*

2018 - Convocational Speaker Faculty Nomination, *ASU*

2018 - Outstanding Software Engineer Faculty Nomination, *ASU*

2018 - Blowers Engineering Scholarship, *ASU*

2017 - First Place *PayPal Opportunity Hacks Hackathon*

2017 - First Place *AZ Desert Hacks Hackathon*

2016 - Best Embedded Hack Nomination *PennApps Hackathon*