

Shahabedin Sagheb

MFA, MA, BS

Digital Design and Fabrication Coordinator,

School of Arts, Media, and Engineering, *Arizona State University*

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Education

2017, MFA in Digital Technology

Herberger Institute for Design and the Arts, *Arizona State University*

2013, MA in Industrial Design – Product Design

Department of Industrial Design, *University of Art*

2009, BS in Mechanical Engineering – Solid Mechanics

School of Mechanical Engineering, *Shiraz University*

Honors, Awards & Patent

- SWISH: Shifting Weight-based Interfaces for Simulated Hydrodynamics in Mixed-Reality Fluid Vessels (Provisional US Patent filed)
- First Prize, non-game application, Intel DevLab Phoenix
- Special Talent Award, Herberger Institute For Design and The Arts
- John Ridgway/Sylvia Orman Scholarship

Professional Experience

2017 - Present | Digital Design and Fabrication Coordinator,

School of Arts, Media and Engineering, *Arizona State University*

Key Responsibilities

- Leading and training a group of 12 students with novel digital design practices and software pipeline implementation
- Research and development on new digital design and fabrication practices and tools
- Providing research labs with efficient and cost-effective prototyping solutions
- Providing product design consultation to research labs
- Providing hands-on feedback to 500+ students and 40 faculty/staff

Key Achievements

- Establishing AME Knowledge Center, an online repository of video tutorials for operating digital fabrication equipment
- Re-designing FabLab, AME's digital fabrication facility for accessibility and ease of use. The improved space is now highly regarded within the school and the institute.

2016 - 2017 | Instructor, Arizona State University

Key Achievements

- Teaching fundamentals of digital media production to undergraduate students
- Providing relevant content and resources on industry standard software
- Critiquing students' projects and providing constructive feedback
- Range of topics taught includes: 2D/3D Modeling and Animation, Multimedia recording and editing, incorporating state of the art cameras, projectors and audio recorders in media projects

2016 - 2017 | Graduate Coordinator, Arizona State University

Key Achievements

- Coordinating 3 undergraduate sections of Intro to Digital Media class
- Providing feedback to instructors on their syllabus and software/hardware pipeline
- Strategizing and procurement of new digital tools in order to improve the course content

2016 | Technical Support

Production of "THE SKY IS FALLING...", Durational Performance by Adriene Jenik

Key Achievements

- Implementing a low latency live camera feed between multiple drones and host computer
- Designing an efficient video streaming software pipeline for a day-long performance

2014 - 2017 | Graduate Teaching Assistant, Arizona State University

Assistant/Lecturer for a variety of technology oriented classes at School of Arts, Media and Engineering

Key Achievements

- Providing hands-on feedback to undergrad/grad students
- Presenting efficient practices in coding, multimedia production, and rapid prototyping
- Range of topics taught includes: Programming for media arts, Multimedia editing and installation, Interactive media design, Rapid prototyping, Projection mapping, Physical computing

2015 - 2016 | Graduate Research Assistant, Arizona State University

Key Achievements

- Implementing best practices for Data Visualization for Online peer review systems
- Design and implementation of an online repository and website for the director of School of Art

2015-Present | Executive post, Member

- Arts and Performance Chair - ACM TEI'19 Conference
- Assistant Coordinator - 3D Scanning Workshop, International Sculpture Conference 2015
- Board Member – Visiting Artist Lecture Series, ASU School of Art, 2015
- Videographer - Telluride Mushroom Festival, August 2015, *Telluride, CO*

2012 – 2013 | Visualization, Motion Designer

Noura Form Design Studio

Key Responsibilities

- Design and implementation of virtual architectural walkthrough using Unity 3D
- Designing realistic interior/exterior 3D models

2011 – 2012 | Graduate Teaching Assistant, *University of Art, Tehran*

Assistant/Lecturer for a engineering design classes

Key Achievements

- Presenting sophisticated stress/strain analysis to non-STEM students
- Assisting students with integrating engineering analysis to their design projects
- Providing students with efficient engineering problem solving techniques, including root cause analysis

2012 | Technical Advisor, *University of Art, Tehran*

Key Achievements

- Assisting students with analyzing their designed products using FEM methods
- Providing best practices to incorporate efficient factor of safety in designing furniture

2009 – 2010 | Design, Research and Development Engineer

Kimiagaran Sanat Pars (Subsidiary of *Fateh Sanat Kimia Group*)

Key Responsibilities

- Analyzing and running simulations on heavy industry convection coils
- Strategizing procurement of parts for flares and convection coils
- Analyzing and approving vendor CAD designs
- Traveling to manufacturing facilities to oversee the production
- Traveling to installation site for supervision

Technical literacy

Rapid prototyping, Physical Computing, Hardware/software customization, New/off the shelf technology implementation, Projection Mapping, Motion Capture, Computer Vision, Infrared Sensing, Virtual/augmented/Mixed Reality, 3D Scanning and Tracking, Interactive Media Design, Multimedia Production, Hardware/software pipeline implementation

Skills

Digital Fabrication, Rapid Prototyping

- 2D | Laser cutter, Vinyl Cutter, CNC Router
- 3D Printing | Fused Deposition Modeling (FDM) and Stereolithography (SLA)
- Physical computing | Arduino

Programming Skills

- Visual | Max/Msp
- Interpreted | Python

Software Skills

- 3D Modeling, Sculpting, CAD/CAM | SOLIDWORKS, Rhino, 3ds Max, Maya, ZBrush, Meshmixer, Fusion 360
- Rendering | V-Ray, Mental Ray, Photoview 360
- Game Engine | Unity3D, Unreal Engine
- Motion Capture | OptiTrack Motive, MotionBuilder
- 2D Modeling, Illustration, Compositing | AutoCAD, Adobe Illustrator, Photoshop, CorelDraw
- Animation, Special Effects | Adobe After Effects, DragonFrame
- Multimedia Editing | Adobe Premiere Pro, Audition, Media Encoder, Audacity

Fabrication Skills

- Wood | Bandsaw, Panel saw, Table saw, Miter saw, Drill press, Router
- Metal | Welding, Cutting, Forming, Drilling, Milling and Lathe

Attended Workshops

- IDEO, *with Afshin Mehin, University of Art, 2011*
- Ziba Design, *with Mehdi Mojtavavi, Science and Technology University, 2012*

Selected Academic Papers, Project and Thesis

- “SWISH: Shifting Weight-based Interfaces for Simulated Hydrodynamics in Mixed-Reality Fluid Vessels”, Shahabedin Sagheb, Alireza Bahremand, Robert LiKamWa, Byron Lahey, TEI’19 (In Press)
- “Gestures of the Everyday”, *advised by* Adriene Jenik, Daniel Collins, David Tinapple, *Arizona State University*, MFA Thesis, 2017
- “CritViz – Peer Review and Critique”, *Panel discussion*, Foundations in Art: Theory and Education, 16th Biennial Conference: Beyond the Core, *Kansas City Art Institute*, Kansas City, Mo, 2017
- “Design of a MP3 Player in order to Stimulate Affectional Human-Product Bond”, *advised by* Niloufar Shadmehri, *University of Art*, MA Thesis, 2013

- “Meaningful Disruptions in HCI: The Case of Interface Design”, *advised by Niloufar Shadmehri, University of Art, 2013 (unpublished)*
- “Study of emotional design in order to implement new strategies in branding and corporate identity”, Oral Presentation, *University of Art, 2011*
- “Quasiturbine engine: exploring new approaches in future vehicle engines”, *advised by Farhang Daneshmand, Shiraz University, B.S. Thesis, 2009*

Exhibitions

- “We Move Lightly”, Interactive Installation, Currents New Media 2017, El Museo Cultural de Santa Fe, *Santa Fe, NM, June 9 – 25, 2017*
- “Gestures of the Everyday”, Interactive Installation, Harry Wood Gallery, *Tempe, AZ, April 24-28, 2017*
- “The Wild One”, Interactive Kinetic Sculpture, “Mass Action”, group exhibition, Unexpected Gallery, *Phoenix, AZ, 2015*
- “Face Flip”, Interactive installation, Spark! Mesa’s Festival of Creativity, Mesa Arts Center, *Mesa, AZ, 2015*
- “Of Reality”, Interactive Installation, [nueBOX] residency, Phoenix Center for the Arts, *Phoenix, AZ, 2016*
- “ShifT”, Interactive Installation, Digital Culture Gallery, School of Art, Media + Engineering gallery, *Tempe, AZ, 2016*
- “The Hidden”, Interactive Installation, Digital Culture Gallery, School of Art, Media + Engineering gallery, *Tempe, AZ, 2016*
- “Black Hole”, Video. “Maybe tomorrow, darling”, group exhibition, *Phoenix, AZ, July 17th - August 7th, 2015*
- “Interrelation”, Interactive installation, Digital Culture Show, group exhibition, *Tempe, AZ, 2014*
- “There is a Puppeteer in My home”, 2D animation, Group Exhibition, New Graduate Students Exhibition, Harry Wood Gallery, *Tempe, AZ, 2014*

Spoken Languages

English, Farsi (Persian)