

## Keehong Youn

younkeehong@gmail.com | younkhg.github.io | 805 452 3202

### Skills

Interactive real-time graphics programming with C++, OpenGL, and GLSL

Multimedia programming and fast prototyping with OpenFrameworks, Processing

Game programming with Unity3D

Other: Python, Javascript, Adobe Creative Suite, SolidWorks, Rhino 3D

### Education

Ph.D. in Media Arts and Technology. University of California, Santa Barbara (2019)

- Advisor: Prof. JoAnn Kuchera-Morin

M.S. in Mechanical and Aerospace Engineering. Seoul National University (2014)

- Advisor: Prof. Hyunwoo Bang

B.S. in Mechanical and Aerospace Engineering. Seoul National University (2007)

### Experience

Open source project contribution: "Allolib", a C++ library for interactive multimedia applications

- Main developer since the beginning of the project
- Stereographics projection mapping rendering pipeline development
- <https://github.com/AlloSphere-Research-Group/allolib>

Stereographic spherical projection mapping software for large scale VR system

- Academic Research: Simulation, Visualization & Sonification of Electron Wavefunctions (2015-18)
- Sponsor: AlloSphere Research Group, University of California, Santa Barbara

Stereographic volumetric visualizations of scientific data in VR environment

- Academic Research 1: Transmission Electron Microscope/Atom Probe Visualization (2015-16)
- Academic Research 2: Interactive Visualization of Li or Na diffusion in intercalation compounds (2018-19)
- Sponsor: AlloSphere Research Group, University of California, Santa Barbara

Finger tracking interface development using depth sensing camera

- Academic Research: "Spatial interface for improving UX of car navigation system" (2012)
- Sponsor: Hyundai NGV

## Real-time sensor data network software development

- Academic Research: "Brain Fusion: a Study of performing Arts and Design Using New Technology" (2013)
- Sponsor: Seoul National University Development Fund

## Upper body tracking system software development

- Academic Research: "Home Rehabilitation System for Upper Limbs of Stroke Patient" (2012)
- Sponsor: Korean Ministry of Knowledge Economy and Microsoft Asia

## AR based cell tracking software development for microscopes

- Academic Research: "Single Cell Addressing by Microscope Augmented Reality" (2012)
- Sponsor: Korean Ministry of Education and Science Technology

## Eye-tracking software development

- Eye-Tracking Solution Startup "MadGenerator" (2013 - 2014, Korea)

## Instructor: Visual programming for projection mapping with Processing

- Korea Creative Content Agency, "Content Fusion Academy" (2015, Korea)

## Instructor: Visual and interactive programming with VVVV, Unity3D

- Samsung Electronics, "Software Challenge Camp" (2011-14, Korea)

## Instructor: Visual and interactive programming with Processing, VVVV

- Art Center Nabi WorkShop Series: New Media Programming (2011, Korea)

## Commercial work: Interactive entertainment system & application for public events

- Nike Korea Women's Just Do It (2019, Korea)
- Nike Korea School Challenge (2017, Korea)
- Nike Korea Shooting Challenge (2015, Korea)

## Publication

### PROBABLY/POSSIBLY?: An Immersive Interactive Visual/Sonic Quantum Composition and Synthesizer

- JoAnn Kuchera-Morin et al.
- Proceedings of the 25th ACM international conference on Multimedia, 2017

### Time-lapse microscopy using smartphone with augmented reality markers

- Dongyoub Baek, Sungmin Cho, Kyungwon Yun, Keehong Youn and Hyunwoo Bang
- Microscopy Research and Technique, Vol. 77, Issue 4, 2014

### ElaScreen: Exploring Multi-dimensional Data using Elastic Screen

- Kyungwon Youn, Junbong Song, Keehong Youn, Sungmin Cho, Hyunwoo Bang
- SIGCHI 2013 Extended Abstracts