Keehong Youn

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6 Years of experience in media programming with C++, developing real-time audio-visual applications for media art projects and engineering research.

Skills

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

Multimedia programming and fast prototyping with OpenFrameworksand 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)

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

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

Research

Stereographic spherical projection mapping software for large scale VR system

> Academic Research: Simulation, Visualization & Sonifcation 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

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

Finger tracking interface development using depth sensing camera

> Academic Research: "Spatial interface for improving UX of car navigation system" (2012)

> Sponsor: Hyundai NGV

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

Teaching

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)

Industry

Eye-tracking software development

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

Open Source

"Allolib", a C++ library for interactive multimedia applications

> Main author since the beginning of the project

> https://github.com/AlloSphere-Research-Group/allolib

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