

## Workshop/Tutorial

**Title** GestureLab Workshop



### Instructor

Judith Doyle, Associate Professor, Faculty of Art; Co-Director, Social Media and Collaboration Lab (SMACLab) OCAD University, Toronto Canada.

Nicholas Beirne

### Program Schedule

Date/Time: June 22(Sat)/10:00-18:00

Venue: Training room 1, ACC Archive&Research(B4)

- 10 AM - 11:30 AM : Intro to the process of using volumetric video (moving image point clouds) and photogrammetry as source material for Unreal. Intro to the collaborative artwork in the form of a quilt, to be staged in the Unreal VR engine.
- 11:30 AM - 1:30 PM : Field capture in the area near the Asia Cultural Centre using digital cameras and smart phone cameras for photogrammetry, and a depth camera for volumetric video capture.
- 1:30 PM - 2:30 PM : Lunch break.

*NOTE: A brown-bag or order-in lunch is recommended*

- 2:30 PM - 6 PM : Processing photogrammetry files using Agisoft software. Preparing depth files for uploading to Unreal. Uploading all point clouds. Staging point cloud files in Unreal. Planning for a presentation or demo at ISEA2019 and future collaborative potentials.

### Target Audience

ISEA2019 participants, Students, Artists and Members of community-based organizations

**Number of participants (min./max)** 4-15 people

### **Prerequisite for participants**

Anyone who is interested in a hands-on intro to depth capture is welcome, no special technical experience required.

To prepare, scout the location around the ACC ahead of the workshop, to observe elements that would be interesting to document.

For gesture capture, urban wildlife (pigeons, animals), embodied labour (cooking, construction, dance, exercise) and people in motion (busy paths, intersections, play areas, cafes) can be sources of gesture to record. Participants may perform their own gestures (movement, sound) for depth capture. Plan gestures ahead, and limit the duration to 30 seconds or less.

For photogrammetry (still point clouds) the best subjects are solid and textured, without harsh shadows. For example, tree trunks, staircases, graffiti walls, benches and architectural features no taller than about 7 feet make good subjects, not in direct sunlight.

### **Abstract**

The GestureLab Workshop is a hands-on introduction to photogrammetry and volumetric video capture using a depth camera. Workshop participants will go outside on location near ISEA's base at the Asia Cultural Centre and record gesture, trees and architecture using photogrammetry and the depth camera. Sounds and depth images will be uploaded into the Unreal VR engine. The Workshop participants will contribute to a collaborative artwork, based on the form of a quilt, where different pieces are fabricated in art workshops around the world and compiled in Unreal. Also in the workshop, we will explore including depth camera and photogrammetry images in the Unreal game engine.)

### **Short Biography of the Organizers**

Judith Doyle is a post-disciplinary artist and researcher whose work includes media production, publication and pedagogy. Based in Toronto at OCAD University, Judith is an Associate Professor in Integrated Media. Raul Altosaar is an emerging artist and researcher, working with Principal Investigator Judith Doyle at the Social Media and Collaboration Lab, OCADU. Raul oversees projects in the Unreal engine in VR/AR.

Judith Doyle's early work included artists' teleculture in pre-Internet forms, facsimile transmission and slow-scan video, as part of the international artist collective Worldpool. Her films screen internationally; her research creation includes both art and scientific communities. As Artist in Residence at the Memory Link program at Baycrest Health Sciences Centre (2010-2012), she collaborated with neuroscientists and clients with brain injury and associated memory loss. GestureCloud - the collaborative artist team founded by Doyle in 2010 with Beijing-based artist

Fei Jun – considers the political and economic dimensions of labour in contemporary forms spanning embodied and virtual environments.

As Co-Director of the Social Media and Collaboration Lab (SMAClab) at OCAD University, Judith Doyle's team includes research collaborators, International interns and graduate students with expertise including art fabrication, contemporary art theory and writing, programming, sound design, virtual architecture, and media production. Under Doyle's supervision and direction, the SMAClab team develops art and art creation tools (software modifications, computer files, mechanics/physical systems) using a range of media, including depth cameras adapted for motion capture using skeletal tracking and point cloud systems, and VR builds in the Unreal engine.