CREATIVE COMPUTING WORKSHOP

11 - 22 JULY

FACULTY OF ARCHITECTURE BUILDING AND PLANNING UNIVERSITY OF MELBOURNE

This workshop will introduce participants to the basics of creative computing including associative geometry, parametric design, and responsive environments.

If you are interested in taking part can you please register your interest by emailing Jas Johnston (jj@unimelb.edu.au) by Monday the 6th of June indicating an interest in one or both streams. Please include your contact details, year level and major/degree.

The expected cost of the workshop is $300 per stream (to be confirmed after we know the expected student numbers)

INTRODUCTION (OPTIONAL)
The workshop will be preceded by a one-session introduction to computational geometry and modelling techniques (Rhino) on Friday 8 July 10 am - 1pm. This introduction is optional, will be targeted at complete beginners and invoke a separate fee of $30. Students will be requested to watch Lynda Rhino tutorials before commencement of workshop if they are not familiar with

FOUNDATION
All students will initially be introduced to concepts and processes of visual programming and scripting through demonstration and experimentation with Grasshopper + RhinoScript and MAX/MSP/Jitter + Processing through an intensive initial 2 days. Participants will be introduced to the software and led through exploratory exercises.

After completing the foundation, the workshop will run in two streams. These will be taught through 3-hour studios every second day, on Monday, Wednesday and Friday.

Both streams will work towards a collaborative final project that exhibits the processes and skills learnt throughout the workshop.

STREAM 1: ASSOCIATIVE GEOMETRY
This stream will introduce associative geometry, interactive manipulation of geometry and parametric design concepts using visual programming and scripting in Grasshopper. It will emphasize the interoperability with external data sources and other development environments.

STREAM 2: RESPONSIVE ENVIRONMENTS
This stream will introduce interactive manipulation of geometry and other data using visual programming and scripting in MAX/MSP/Jitter and Processing. It will emphasize the interoperability with external data sources and other development environments.

LINKS TO FURTHER STUDY
A number of Master-level studios in semester two will benefit from the skills acquired in this workshop. These studios include: 1) Prefabricated School Studios run by Justyna Karakiewicz/Steve Hatzellis and Sarah Backhouse/Tom Kvan and 2) Performative Architecture Studio by Stanislav Roudavski. Students wishing to participate in the Performative Architecture Studio are particularly encouraged to take at least one of the streams in this workshop because this studio will focus on the design of environments that utilise both parametric geometry and interactivity.
PROCESSING

Processing is an open source programming language and environment for people who want to create images, animations, and interactions. Initially developed to serve as a software sketchbook and to teach fundamentals of computer programming within a visual context, Processing also has evolved into a tool for generating finished professional work. Today, there are tens of thousands of students, artists, designers, researchers, and hobbyists who use Processing for learning, prototyping, and production.

www.processing.org

MAX MSP

Max gives you the parts to create unique sounds, stunning visuals, and engaging interactive media. These parts are called ‘objects’ – visual boxes that contain tiny programs to do something specific. Each object does something different. Some make noises, some make video effects, others just do simple calculations or make decisions. In Max you add objects to a visual canvas and connect them together with patchcords. You can use as many as you like. By combining objects, you create interactive and unique software without ever writing any code (you can do that too if you really want to). Just connect.

www.cyle74.com

GRASSHOPPER

For designers who are exploring new shapes using generative algorithms, Grasshopper® is a graphical algorithm editor tightly integrated with Rhino’s 3-D modeling tools. Unlike RhinoScript, Grasshopper requires no knowledge of programming or scripting, but still allows designers to build form generators from the simple to the awe-inspiring.

www.grasshopper3d.com