Workshop description for eCAADe 2012 Prague

- Title of the workshop:

  AB-USE Computation in Architecture

- Teacher(s):

  Dr. Yannis Zavoleas, Architect - Assistant Professor, Architectural Design & Digital Media, University of Patras, Greece, PhD National Technical University of Athens, Greece. MSc Massachusetts Institute of Technology - Comparative Media Studies. MArch University of California Los Angeles. Dipl. Arch. Engineer.

  Ioanna Symeonidou, Architect - Lecturer at Technical University of Graz, Austria, PhD candidate Aristotle University of Thessaloniki. MSc Architectural Association, London – Emergent Technologies and Design. Dipl. Arch. Engineer.

- Expected audience:

  Architecture students or recent graduates, no previous experience with scripting is required

- Length (workshops are divided in half-day blocks, so whether you need 1 or 2 half days):

  Workshop can be arranged for either 1 or 2 half days. Ideally it should make use of 2 half days, but this depends on the availability of workshop slots.

- Short summary:

  Nowadays it has become common that the digital medium does not merely define a vague research area, but a powerful tool of action, fully incorporated into architectural design practices. It is important to consider, however, that the “physical” properties of a medium – including the digital one – affect decisively the approaches and the results of design; additionally, that the modes of implementation about a medium often exceed its nominative properties. The medium gives form to creative thinking and acting, therefore it is necessary to scrutinize upon its qualities, in close relation to the ways it interferes with the design process.

  The workshop responds to the above challenge. Its goal is to integrate parametric methods in architectural design. The scripting language MEL is introduced, developed on the platform set by MAYA design software. The basics of parametric design, the use of algorithms and the related techniques are presented following an intensive experimenting approach. Moreover, the parametric design methods are compared to digital model development. After a series of initial implementations on scripting techniques, participants will work in small groups, as they will focus on design research directions of their choice.

  Details and student work of previous workshops can be found here:

  http://abusecomputation.wordpress.com/

- Learning experience for the audience:

  The workshop will offer an introduction to scripting with Maya MEL. Participants will aqcuire basic scripting skills (syntax, variables, arrays, flow control) and they will produce geometry based on mathematic rules. Through the examples and excerises they will explore the posibilities of computational design for architectural applications. It is a hands-on workshop, there are introductory lectures as well as working sessions.

- Requirements of the audience (do they need some software, some knowledge, skills...):

  Audience should bring their own laptops. Autodesk Maya is needed to be installed. Trial version, educational version is enough. Some minimal experience with 3D software is preferable but not mandatory.

- Requirements of the host (do you need special facilities):

  Projector and whiteboard with markers. Wi-fi might also aid the distribution of teaching material and the participants can upload their work (optional).