

# Hybrid Environment for Architecture

The New Architectural Design Space - ECAADE International Workshop and Regional Conference, May 2014, Bialystok University of Technology, Poland

Home

Workshop

Organisation

Committee

Details

Contact

PROGRAMME

WORKSHOPS

CONFERENCE



ECAADE Organisation  
Bialystok Univ. of Technology  
Lodz Univ. of Technology  
Support

## **Welcome to the [ECAADE International Workshop & Regional Conference](#)**

[ECAADE](#) is an international organisation developing and promoting scientific research and education in the field of computing in architecture.

In addition to the annual conference, ECAADE also holds a Regional International Workshop, which is hosted by a different University each year. The goal of the workshop is to take eCAADE to regions that have never hosted an eCAADE conference in the past. The workshop should promote ECAADE's goal of fostering high quality teaching and research in such regions and help the ECAADE organization to get acquainted with people and schools who might be willing to organize the ECAADE conference in the future.

**The next event will be hosted by the [Faculty of Architecture, Bialystok University of Technology in Poland](#) on 9 - 10 May 2014.**

It is organized in cooperation with the Lodz University of Technology.

The workshop will be a forum for experimentation and discussion about the use of real-time interactive systems - analogue and digital - in architectural design. These systems span from pencil and paper, physical models making, Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) environments to novel Human-Computer Interaction systems such as multimodal architectures. The common feature of digital environments is a strong user centric orientation which requires real-time processing of simulation aspects as well as input/output events according to perceptual constraints. Workshop will be the day of experiments in virtual reality, interactive design and testing of augmented reality as a design environment.

The problem is: **“In what way do we design?”** This workshop will concentrate on the early creative stages of the design process during which the designer gradually gathers the information about the problem, applying appropriate rules, tools and media. If the tools are chosen as a starting point of consideration, designing may be analysed as manual or digital. If we chose the medium - design may be considered as physical or virtual. The main thesis is that designing proceeds somewhere in between. “Somewhere in between” means the space where manual, digital, virtual are mixing, overlapping, and transforming one into the other. As a case study the process of designing of blurred function object is presented. In this experimental design studio we paid particular attention to the design process and we searched for the answer to the following questions: how to find an idea (what tools/media are helpful), how to express, fix and transform that idea?

We would like to explore three fields of design methods/media/tools at early design stages:

- Traditional designing
- Designing supported by the software (parametric design, scripting, ...)
- Designing supported by the new hardware (3D scanning, 3D printing, ...)

# Hybrid Environment for Architecture

The New Architectural Design Space - ECAADE International Workshop and Regional Conference, May 2014, Białystok University of Technology, Poland

## PRELIMINARY PROGRAMME

### Friday 09 May 2014

8.00 – 9.00 – Registration

9.00 – 9.30 – Opening

9.30 – 10.00 – Keynote Presentation – **Ultimate CAVE Experience**, Joanna Makuch, i3D

10.00 – 10.30 – Coffee break

10.30 – 12.30 – Workshops Part 1

<u>Multi – agent form simulation</u>  <i>G. Wurzer W. Lorenz Vienna Univ. of Technology, Austria</i>	<u>Design 3D Scan Sketches</u>  <i>A. Asanowicz, Białystok Univ. of Technology, PL</i>	<u>CAVE experiments</u>  <i>A. Jakimowicz &amp; B. Sawicki, Białystok Univ. of Technology, PL</i>	<u>Parametric Urban Design</u>  <i>Nicolai Steino Aalborg University, Denmark</i>	<u>Coding an Idea</u>  <i>Sebastian Białkowski / Anetta Kępczyńska – Walczak Lodz Univ. of Technology, PL</i>
------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------

12.30 – 13.30 – Lunch

13.30 – 16.00 Workshops Part 2

<u>Multi – agent form simulation - cont.</u>	<u>Design 3D Scan Sketches – cont.</u>	<u>CAVE experiments – cont.</u>	<u>Parametric Urban Design – cont.</u>	<u>Coding an Idea - cont.</u>
----------------------------------------------	----------------------------------------	---------------------------------	----------------------------------------	-------------------------------

14.00 – 15.00 - Graphisoft ArchiCAD BIM presentation

16.00 – 16.30 – Coffee break

16.30 – 18.00 – Workshops Part 3

**cont. of the workshops and / or:**

**3D Modelling for:** \_\_\_\_\_ **CAVE Presentation** \_\_\_\_\_ **3D Printing**  
- based on the work produced during workshops

18.00 – 19.00 – Autodesk 123D presentation

19.30 – Dinner

### Saturday 10th May 2014

9.00 – 10.30 – Workshops Part 3

**Workshop Models in:** \_\_\_\_\_ **CAVE Presentation** \_\_\_\_\_ **3D Printing**

10.30 – 11.00 – Coffee break

11.00 – 12.30 – Conference Session 1

12.30 – 13.30 – Lunch

13.30 – 15.00 – Conference Session 2

15.00 – 15.30 – Conference closure

## **CONFERENCE SESSION 1 – MAIN AUDITORY**

**SATURDAY 10.05.2014**

**11.00 – 11.30**

**Keynote: Zenon Rychter**

Structural design by virtual shaking

**11.30 – 12.30**

**Chair: – Zenon Rychter`**

**1. The act of design – beyond the digital?**

Anetta Kepczynska-Walczak

**2. Parametric, generative, evolutionary, organic and bionic architecture – a new look at an old problem**

Marta Pakowska

**3. Hybrid design approach in education using a progressive rule-based digital design development. Sopot college experiences**

Grzegorz Pęczek, Jan Cudzik

**4. Developing a parametric urban design tool. Some structural challenges and possible ways to overcome them**

Nicolai Steinø, Esben Obeling

## **CONFERENCE SESSION 2 – MAIN AUDITORY**

**SATURDAY 10.05.2014**

**13.30 – 15.00**

**Chair: – Anetta Kępczyńska-Walczak**

**1. Spatial continuity diagram on time and distance line**

Waldemar Marzęcki

**2. The virtual promenade. didactic experiments on the potentials of combining 13conventional and digital modelling of the city experienced in movement**

Anette Kreutzberg, Claus Bohn

**3. Real time gesture recognition in 3D space using selected classifiers**

Łukasz Gadomer, Marcin Skoczylas

**4. Material, information and formation in parametric design. Experiments in the research laboratory of the students of the faculty of architecture of Poznan University of Technology**

Krystyna Januszkiewicz, Jakub Pawlak

**5. A day in a shadow of high-rise – 3D parameterization and use of public space around pżm / hotel radisson building complex in center of Szczecin**

Adam Zwoliński

**6. Application of 3D virtual city models in urban analyses of tall buildings – today practice and future challenges**

Klara Czyńska, Paweł Rubinowicz