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Classification and Analysis of Open Urban Spaces

Dates: 4-6 July

Location: Universidade de Lisboa, Portugal

Organizers: Elif Ensari (PhD candidate), Universidade de Lisboa, Istanbul Technical University
    Ljiljana Čavić (PhD), Universidade de Lisboa
    José Beirão (Assist.Prof., PhD), Universidade de Lisboa

Duration: 2,5 days
Number of contact hours: 21   ECTS credits: 1,5

Maximum number of participants: 15
Minimum number of participants: 9

Summary:

A brief overview of walkability as a quality of the built urban environment and morphological properties contributing to it will be presented. The theory and application of a 3d representation model of open urban spaces - the Convex Solids and Voids - as well as some additional automated methods to classify and analyse urban streets will be introduced. The use of these methods in assessing walkability of urban streets and mapping, basic analysis and understanding of acquired data will be explored. A study of an urban area in Lisbon will be carried out with the participants as a case.

Objectives:

- To acquire a general understanding of means to quantitatively analyse the aspects of the built environment of open urban spaces that affect the quality of urban experience.
- To learn about the Convex and Solid Void representation model, the theory behind it, its capabilities to classify and assess urban open spaces. To understand the potentials and possible future uses of this model.

- To get a command of Convex-Solid Voids as well as some other 3d model and GIS based methods to analyse urban streets for walkability.
- To map, analyse and understand the data acquired for each unit of urban space and compare with data from other sources indicating urban activity.
- To apply acquired analysis methods on a defined area within a selected neighbourhood.

Schedule:

July 4 (afternoon):

- General introduction to quantitative assessment of urban environment qualities and walkability. Basic introduction of software to be used.

July 5 (morning):

- Lecture introducing the Convex Solid-Void model, it's theory, current and future applications. Demonstration of a case study.

July 5 (afternoon):

- Application of Convex Solid-Void model on a selected case.

July 6 (morning):

- Introduction of additional methods of measuring in 3d model and GIS.

July 6 (afternoon):

- Mapping and analysing of resulting data. Presentation of other potential uses of introduced methods.

Prerequisites:

Basic command of Microsoft Excel, Rhinoceros3d, Grasshopper and GIS (QGIS or ArcGIS) software is required. Python scripting language knowledge is a plus.

Requirements:

Projector, computers with pre-installed software (at CIFA) or USB sticks with virtual machine installations.