

ISPRS workshop 3D-ARCH 2013
25-26 February 2013, Trento, Italy

From February 25th to 26th 2011, the 5th 3D-ARCH international workshop on "3D Virtual Reconstruction and Visualization of Complex Architectures" was held in Trento, Italy.

The workshop chairs were Jan Boehm (UCL London, UK), Thomas Kersten (HafenCity University Hamburg, Germany), Takashi Fuse (University of Tokyo, Japan), Diego Gonzalez-Aguilera (University of Salamanca, Spain) and Fabio Remondino (FBK Trento, Italy). The event was the fifth in a series, following the events in Venice 2005, Zurich 2007 and Trento 2009 and 2011. The workshop was sponsored by Breuckmann, Z+F, 3DFlow, Topcon and 3DTarget and held as an event of the ISPRS Working Group V/4 "Terrestrial 3D Modelling: Algorithms and Methods".

The workshop featured almost 90 participants from 13 different nationalities. 39 articles were presented and finally published in the International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XL-5/W1.

The workshop was organized in 10 technical sessions, with topics like "Multi-source Data and Multi-sensors Approaches", "Point Cloud Analysis and Shape Reconstruction", "Procedural and Parametric 3D Modeling", "Automation and Image Registration", "Image Matching and 3D Reconstruction".

Each day of the workshop started with a keynote talk. The first day was introduced by Federico Tombari (University of Bologna, Italy) with a talk on "Invariant features for 3D recognition, registration and segmentation". The talk gave a great overview of the status, problems and efforts in automated 3D registration of point clouds and polygonal models. The second day started with Markus Gerke (ITC / Twente University, The Netherlands) with a talk on "Current developments in airborne oblique imaging - Systems and automated interpretation of complex buildings". The keynote presented the latest developments in oblique aerial cameras with particular focus on existing sensors and feature extraction for building reconstruction.

Four best papers awards were assigned to young researchers and the revised versions of the articles will be published in the Springer "Applied Geomatics" journal.

The workshop conclusions highlighted the strong coming back of photogrammetry for 3D modeling purposes, with different low-cost sensors and open-source solutions. BIM and procedural modeling were also hot topics in the presented papers and discussions notwithstanding accuracy requirement and assessment for 3D reconstruction purposes.

The workshop showed the great interest in the topic of 3D modeling of complex architectures from many different disciplines such as architecture, archeology, cultural heritage, engineering, virtual reality, etc. The presence of many young researchers and participants raises the hope that many of the aforementioned problems will be addressed and solved in the coming futures and research projects.

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