4th International Summer School

3D MODELING IN ARCHAEOLOGY AND CULTURAL HERITAGE

Grosseto, Italy
Department of Archaeology and History of Arts
University of Siena
29 August – 4 September 2011

Organized by
STEFANO CAMPANA – University of Siena, Italy
FABIO REMONDINO – FBK Trento, Italy

LECTURES:
G. Agugiaro (FBK Trento - Italy)
R. Bennett (Bournemouth University - UK)
G. Bianchi (University of Siena - Italy)
S. Campana (University of Siena - Italy)
G. Ceraudo (Universityof Salento - Italy)
L. De Luca (MAP-Gamsau CNRS Marseille - France)
M. Doneus (University of Vienna - Austria)
F. Ferdani (ITABC-CNR - Italy)
M. Forte (University of California Merced - USA)
B. Frischer (University of Virginia - USA)
N. Galiatsatos (University of Durham - UK)
G. Guidi (Politecnico of Milano - Italy)
F. Menna (FBK Trento - Italy)
W. Neubauer M. Doneus (University OF Vienna - Austria)
S. Pescarin (ITABC-CNR - Italy)
F. Remondino (FBK Trento - Italy)
A. Rizzi (FBK Trento - Italy)
M. Sordini (University of Siena - Italy)

OBJECTIVES:

The School aims to bring together archaeologists and scientists, developers and advanced users from geomatics and related fields of application (photogrammetry, remote sensing, LiDAR, GIS, environmental monitoring and mapping) to study and discuss the latest developments in digital recording and 3D modeling of complex objects, contexts and landscapes with emphasis on those of Cultural Heritage value.

TARGET GROUP OF PARTICIPANTS:

PhD students, young researchers and intermediate users of new sensor technologies and methods for digital recording and modeling in environmental and heritage applications.

TECHNICAL PROGRAM:

Monday, 29th August	
13:00 – 14:30	**Registration**
14:30 – 15:00	**Welcome by the Rector of the University of Siena and Major of Grosseto**
15:00 – 15:30	**Geomatics techniques for Cultural Heritage** - *Lecturer:* F. Remondino (FBK Trento, Italy)
15:30 – 16:00	**Heritage needs from geomatics techniques** - *Lecturer:* S. Campana, G. Bianchi (University of Siena, Italy)
16:00 – 16:30	**Coffee break**
16:30 – 18:30	**Airborne LiDAR technology and applications** - *Lecturer:* M. Doneus (University of Vienna, Austria)
18:30	**Ice Break Party**

Thursday, 30th August	
9:00 – 11:00	**Lab 1 – LiDAR data processing** - *Lecturer:* R. Bennett (Bournemouth Univ., UK), M. Doneus (Univ. Vienna, Austria) and M. Sordini (University of Siena, Italy)
10:30 – 11:00	**Coffee break**
11:30 – 13:00	**Lab 1 – LiDAR data processing** - *Lecturer:* R. Bennett (Bournemouth Univ., UK), M. Doneus (Univ. Vienna, Austria) and M. Sordini (University of Siena, Italy)
12:45 - 14:00	**Lunch break**
14:00 - 16:00	**3D recording and interpretation of archaeological excavations and findings** - *Lecturer:* W. Neubauer (University of Vienna, Austria)

16:00– 16:30	**Coffee break**
16:30 – 17:15	**3D reconstruction to the archaeological analysis of medieval settlement –** Lecturers: G. Bianchi (University of Siena, Italy), F. Ferdani (ITABC-CNR, Italy)
17:15 – 18:00	**New developments and opportunities in immersive Virtual Reality for collaborative archaeological research –** Lecturer: M. Forte (University of California Merced, USA)

Wednesday, 31th August	
9:00 – 11:00	**Photogrammetry – theory and applications** - *Lecturer:* F. Remondino (FBK Trento, Italy)
11:00 – 11:30	**Coffee break**
11:30 – 13:00	**Lab 2 – 3D reconstruction from terrestrial images** - *Lecturer:* F. Menna, F. Remondino (FBK Trento, Italy)
13:00 – 14:30	**Lunch break**
14:30 – 16:00	**Lab 2 – 3D reconstruction from terrestrial images** - *Lecturer:* F. Menna, F. Remondino (FBK Trento, Italy)
16:00 – 16:30	**Coffee break**
16:30 – 17:15	**Aerial and oblique photogrammetry in archaeology** - *Lecturers:* G. Ceraudo (University of Salento, Italy)
17:15 – 18:00	**Why archaeologist should move from 2D to 3D documentation and analyses** - *Lecturers:* B. Frischer (University of Virginia, USA)

Thursday, 1st September	
9:00 – 11:00	**Terrestrial optical active sensors – theory and applications** - *Lecturer:* G. Guidi (Politecnico of Milano, Italy)
11:00 – 11:30	**Coffee break**
11:30 – 13:00	**Lab 3 – Acquisition and processing of 3D laser scanning data** - *Lecturer:* G. Guidi (Politecnico of Milano, Italy), A. Rizzi (FBK Trento, Italy)
13:00 – 14:30	**Lunch break**
14:30 – 16:00	**Lab 3 – Acquisition and processing of 3D laser scanning data** - *Lecturer:* G. Guidi (Politecnico of Milano, Italy), A. Rizzi (FBK Trento, Italy)
16:00 – 16:30	**Coffee break**
16:30 – 17:30	**Sensor and data integration** - *Lecturer:* F. Remondino (FBK Trento, Italy)

19:30	**Social dinner**

Friday, 2ⁿᵈ September	
9:00 – 11:00	**Lab 4 – Remote Sensing data for Cultural Heritage** - *Lecturer:* Niko Galiatsatos (University of Durham, UK)
11:00 – 11:30	**Coffee break**
11:30 – 13:00	**Lab 4 – Remote Sensing data for Cultural Heritage** - *Lecturer:* Niko Galiatsatos (University of Durham, UK)
13:00 – 14:30	**Lunch break**
14:30 – 16:00	**Lab 5 – 2D and 3D GIS for Cultural Heritage** - *Lecturer:* G. Agugiaro (FBK Trento, Italy)
16:00 – 16:30	**Coffee break**
16:30 – 18:00	**Lab 5 – 2D and 3D GIS for Cultural Heritage** - *Lecturer:* G. Agugiaro (FBK Trento, Italy)

Saturday, 3ʳᵈ September	
9:00 – 11:00	**Web-based tools for the management of Cultural Heritage 3D models** - *Lecturer:* L. De Luca (MAP-Gamsau CNRS, Marseille, France)
11:00 – 11:30	**Coffee break**
11:30 – 12:15	**New frontiers: virtual archaeology and cyber-archaeology** – *Lecturer:* S. Pescarin (ITABC-CNR, Italy)
12:15	**Closing session & Group Photo**