

3D Digitization for Cultural Heritage

Overview

3D digitization techniques and devices, born in the context of the manufacturing industry, are nowadays an essential tool in the diagnostic, study, conservation and presentation of Cultural Heritage (CH).

The course will present the 3D scanning technologies currently used in the context of the Cultural Heritage field, starting from the basic underlying working principles, to the creation and manipulation of 3D models, to the practical use of 3D data in CH. While, in the end, 3D scanning and computer graphics are entirely engineering / computer science subjects, their application in the cultural heritage field also need a different methodological approach.

The course will emphasise this CH-oriented aspect, while keeping the provided information as technical as possible, to be useful to an engineering / computer science audience.

Modules	<p>Scanning: focused on the creation of 3D data obtained by the measurement of cultural heritage artefacts.</p> <p>Data processing: focused on all the steps, tools and methods of manipulating the raw 3D data coming from measurement to obtain usable 3D models.</p> <p>3D for cultural heritage: focused on the use of 3D models in the framework of integrated cultural heritage projects.</p> <p>Dates: 30th November to 11th December, 2015</p> <p>Number of participants for the course will be limited to forty.</p>
You Should Attend If...	<ul style="list-style-type: none">▪ You are an executive, engineer and researcher from manufacturing, service and government organizations including R&D laboratories.▪ You are a student at all levels (BTech/MSc/MTech/PhD) or faculty from reputed academic institutions and technical institutions.
Fees	<p>The participation fees for taking the course is as follows:</p> <p>Participants from abroad : US \$100</p> <p>Industry/ Research Organizations: Rs. 3,000/-</p> <p>Academic Institutions: Rs. 1,000/-</p> <p>The above fee includes all instructional materials, computer use for tutorials, 24 hr free internet facility. The participants will be provided with single bedded accommodation on payment basis.</p>

The Faculty



Dr. Marco Callieri is a researcher at the Istituto di Scienza e Tecnologie dell'Informazione (ISTI) of the National Research Council (CNR) in Pisa, Italy. He received master degree in Computer Science in 2001 and a PhD in Computer Science from the University of Pisa in 2006. He spent 6 months as a visiting Ph.D. student at the University of Southern California, and 3 months internship at Microsoft Research. Marco Callieri is part of the Visual Computing Laboratory, where he works in the framework of various national and European projects. His

research interests include 3D scanning and 3D data processing, color and appearance acquisition, large 3D dataset manipulation and rendering, 3D printing. He is currently part of the MeshLab development team, and head developer of the 3DHOP tool for online presentation of 3D models. Most of his work is related to the use of new digital technologies in the Cultural Heritage field: experimenting new technologies and methods for the documentation, measurement and diagnosis of cultural heritage artefacts, carrying out on-the-field acquisition campaigns and developing tools for the scientific community. He's been a reviewer for several international journals in the Computer Science community. Since November 2012, he is an editor for the Journal of Cultural Heritage, Elsevier.