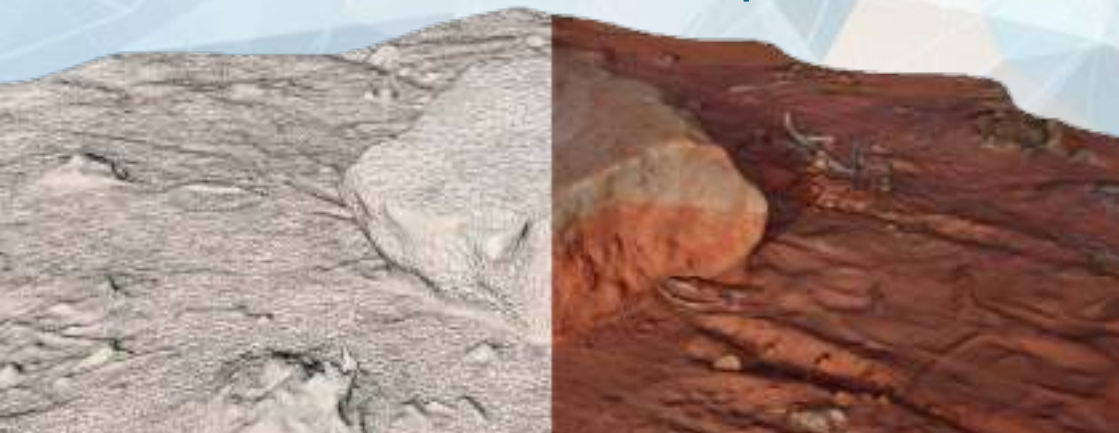


Automated 3D Model **RECONSTRUCTION FROM PHOTOGRAPHS**

18th March 2014

The University of Western Australia | 9.00am - 12.00am
Physics Building, Ground Floor, Centre for
Learning Technology | **FREE WORKSHOP**
registration required





THE UNIVERSITY OF
WESTERN AUSTRALIA

IVEC and The University of Western Australia are pleased to invite you to the workshop ***Automated 3D Model Reconstruction from Photographs***, part of this year Digital Humanities Australasia.

At the end of the workshop attendees should feel confident in applying and experimenting with this exciting new technology. By attending the workshop the common pitfalls can be avoided and attendees will be aware of the key concepts, familiarity with relevant software tools, realistic expectations and limitations, knowledge of applications and research where 3D reconstruction is being employed.

Photogrammetry is the traditional name given to the derivation of some 3D quantity derived solely on the basis of a collection of photographs. In recent years this has been an intensive area of research and the quality of the algorithms is reflected in this effort. The state of the art is currently that one can create reasonable quality 3D models from a collection of photographs without a significant amount of domain knowledge, specialist hardware and software, or with the need to place markers in the scene or follow rigorous calibration procedures.

This workshop will discuss the theory, introduce the current software solutions/pipelines, make reference to camera and techniques that result in an optimal chance of successful reconstructions, and present some of the post processing requirements and tools. In short, the workshop will aim to provide a complete introduction to the subject. The emphasis will be towards 3D capture of heritage objects and this will be the topic of most of the examples.

The workshop outline is as follows:

- Introduction, outcomes and motivation
- History and alternative technologies
- Main software aspects and titles, pipelines
- Photography: lenses, shooting styles
- Case Study 1: 2.5D reconstruction example
- Geometry processing, working with meshes, file formats
- Case study 2: Full 3D example
- Other related topics: resolution, relighting, analysis
- Limitations: occluders, scene movement, shadows
- Case study 3
- Additional applications/topics including rapid prototyping
- Further reading, references, and discussion

This workshop is free of charge – however prior registration is required.

For more information visit www.dha2014.org