



# Total Recall: A Plea for Realistic 3D Reconstruction of Cultural Heritage

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The creation of 3D models of cultural monuments and archaeological sites is still an expensive endeavour. Methods are presented, that have been developed at the University of Leuven and ETH Zurich, in order to alleviate these problems of cost. These include techniques to capture 3D shapes and to texture their surfaces. The underlying strategy is to only use consumer grade hardware. Part of this technology takes the form of a webservice, to which users can upload images, and by which 3D models are sent back in return. This limits the cost and eases the use by cultural heritage professionals. Also, grammar based shape descriptions for architectural styles have been elaborated. They allow for the efficient reconstruction of large-scale sites, like entire ancient cities. A nymphaeum building at the Turkish site of Sagalassos and the well-known Pompeii ruins are taken as cases in point to demonstrate the use of these technologies.



BIOGRAPHY

Luc Van Gool has been a full professor at ETH since the fall of 1998. In 1991 he became an assistant professor in Leuven and in 1996 professor. He still leads a research group in Leuven that focuses on industrial applications of computer vision. In 1998 he became a full professor at ETH in Zurich, where he is now also the head of the Computer Vision group in the department of Electrical Engineering.

With his research teams, Luc Van Gool is a partner in several national and international projects, e.g. the EU ACTS project Vanguard, the EU Esprit projects Improofs and Impact, and the EU Brite-Euram project Soquetec. His major research interests include 2D and 3D object recognition, texture analysis, range acquisition, stereo vision, robot vision, and optical flow.

Luc Van Gool has been a member of the program committees of several leading international conferences including the ICCV, ECCV, and CVPR. In 1998 he received a David Marr Prize at the International Conference on Computer Vision.

He is also a cofounder and director of the company Eyetronics, that specializes on 3D modeling and animation, mainly for the entertainment industry and medical applications. The "ShapeSnatcher" product received one of the EU "EITP" prizes in 1998.

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