

# ***Documenting the Built Environment: Using lasers to 3-dimensionally scan the Cologne Cathedral World Heritage Site***

Dr Douglas Pritchard  
(Heriot Watt University)

**Thursday November 19<sup>th</sup> 2015, 7.30pm**

**Room 222, School of Physics and Astronomy  
University of Glasgow**

International heritage sites face a variety of man-made threats, from global warming and air pollution to urban encroachment and the pressures of increased tourism. The recent iconoclastic destruction of Palmyra or the vandalism of historic religious monuments in Iraq are an immense loss to the region as well as to the international community. Unfortunately, the Middle East is not alone with this problem, looting and intentional damage of universally valued cultural heritage is a significant global problem.



In light of these concerns, there is a critical need for techniques and systems that can effectively digitally preserve monuments and sites before they are irretrievably damaged or destroyed. Using previous projects at Durham Cathedral and Cologne Cathedral as case-studies, the presentation will focus on the use of highly precise documentation systems such as the terrestrial laser scanner and custom-designed rigs, to precisely capture complex architecture forms a virtually preserve them for future generations.



Douglas Pritchard is an Associate Professor at Heriot-Watt University Edinburgh and an Honorary Research Fellow at the University of Glasgow. His area of expertise is in the use of 3D-based documentation and VR systems to 'digitally capture' architectural and natural environments. The foundation of the work utilises sub-millimetre, terrestrial and long-range 3D scanning systems to generate highly precise 3D datasets. Douglas has initiated and developed numerous UK and international 3D documentation projects and in October, he completed a large project at the Cologne Cathedral World Heritage site.

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