

## **OUR WORLD CULTURAL HERITAGE: HOW FUTURISTIC ROBOTS ARE HELPING TO PRESERVE OUR PAST**

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Recent events yet again demonstrate the fragile state of our world cultural heritage and built infrastructure in the face of natural and man-made disasters. These disasters, in addition to the ravages of time, pollution, theft, fatigue, overexposure, mismanagement, and the unintended consequences of efforts to preserve our cultural patrimony, have all taken a major toll on monuments, structures, sculptures, paintings, archaeological and other artifacts that constitute cultural heritage. Science, technology, engineering, arts and mathematics offer the best hope for improving stewardship of these cultural assets and reversing decades or even centuries of damage. This talk will explore robotic technology in the service of cultural heritage diagnostics and preservation and introduce some of the rich digital records as well as visualization and virtual reality techniques that the Cultural Heritage Engineering Initiative (CHEI) is creating at UC San Diego to enable data-driven world-heritage stewardship and preservation.