

## **My Experience on the Application of 3D Digital Data on Cultural Heritage Cases in Taiwan**

Min-Fu Hsu

Department of Architecture, National Cheng Kung University

The concept of national digital archive took off ever since the Taiwanese National Science Council initiated the "National Digital Archives Program" in 2002 and the "National Science and Technology Program for e-Learning" in 2003. Since then, our team began to apply the 3D laser scanning technique to archive and digitalize our nation's precious cultural assets, and at the same time, to apply these digitalized imagery data for other related research studies.

For more than a decade, our research team has been actively exploring different ways in applying the 3D digital technologies on the conservation of various types of cultural heritage in Taiwan. In this presentation, I will share our experience of applying the digitalized imagery data on four aspects, namely, the digital documentation of historic buildings and cultural assets, the challenges of documenting mural painting digitally through time, the digital revival of traditional carpentry wisdom and artefact and lastly, the application of 3D simulations for the conservation of historic buildings.

Having successfully accomplished various projects using 3D digital imagery technology for historic buildings, we hoped the digital information that has been established for the various cultural assets could become a fundamental basis for future research and that the systematic research protocols that we set out from the various projects could be applied to other aspects of studies nation-wide.