專 題 演 講

演 講 者：莊永裕教授（台灣大學資訊工程學系）

演講題目：Image Stitching and Panoramas

演講摘要：

Image stitching is a process of combining a set of images into a larger image with a wider field of view for the scene. One of its popular applications is panoramas. In this talk, I will present several researches related to image stitching and panoramas. Traditional image stitching uses global projective transforms and it has two drawbacks. First, due to the model inadequacy of global warps, the alignment might not be accurate enough. Second, the image could be severely distorted in sizes and shapes by the projective warp. For the first issue, we propose a local warp scheme for better alignment. In addition, the proposed scheme allows us to incorporate user-specified constraints into the stitched image. For the second issue, we propose a novel parametric warp, the shape-preserving half-projective warp, which is a spatial combination of a projective warp and a similarity warp. It generates a multiperspective view and reduces distortion of the stitched images. Finally, I will present a couple of methods related to visualizing panoramas.

講者簡介：

Yung-Yu Chuang is a professor of the Department of Computer Science and Information Engineering at National Taiwan University. He received his B.S. and M.S. from National Taiwan University in 1993 and 1995 respectively, Ph.D. from University of Washington at Seattle in 2004, all in Computer Science. He joined National Taiwan University in 2004. His research spans the fields of computer graphics, computer vision and multimedia, with focus on computational photography and rendering. Professor Chuang has served on the editorial board of IEEE CG&A and the program committees of several prestigious conferences including ACM SIGGRAPH Asia, IEEE CVPR, IEEE ICCV and IEEE ICCP.