

# 体视显示中的一种新技术

程鸿[1, 2] 章权兵[1] 韦穗[1]

[1]安徽大学电子科学与技术学院, 安徽合肥 230039 [2]安徽省现代成像与显示技术重点实验室, 安徽合肥

230039

**摘要:**体视显示是一种重要的 3D 显示技术, 由于在技术实现上比较简单, 因此在广告宣传、教育、娱乐、机械设计、建筑设计、医疗等领域具有广阔的应用前景。体视显示需要满足双眼特性的图像对, 但是通常拍摄的图像一般不符合双眼特性, 为此, 研究了一种新的视图合成方法。该方法的核心思想是根据两幅源图像的张量和给定的摄像机位置来计算新的三焦点张量, 再利用新张量 and 对应点得到满足双眼特性的图像对。实验证明该算法简单, 容易实现。

**关键词:**体视显示 三焦点张量 视图合成

分类号: [TN911.73](#) 文献标识码: A 文章编号: 1673-629X (2008) 05-0231-03

## A New Technique in Stereo Display

CHENG Hong, ZHANG Quan-bing, WEI Sui

1. School of Electronic Science and Technology, Anhui University, Hefei 230039 ;China; 2. Key Laboratory of Modern Imaging and Displaying Technology of Anhui Province, Hefei 230039, China

**Abstract:** Stereo display is an important technique of 3D display techniques and it has been widely used in many fields, such as advertisement, education, entertainment, machine desigoment, architecture design, medical treatment and so on. Stereo display needs images satisfying characteristic of two eyes, however, general images can not satisfy this condition. So must make these images satisfying the characteristic of two eyes. In this paper, propose a new view- synthesis method. The core of this method is that a new trilinear tensor is computed according to the tensor of two views and desired virtual camera positions (translation and orientation) and then the desired virtual views which satisfy characteristic of eyes can be acquired by the new trilinear tensor and matching points between two images. This algorithm had proved simply by the experiments.

**Key words:** stereo display; trilinear tensor; view-synthesis