

图形、图像、模式识别

关节处增加截面的三维虚拟人皮肤变形方法

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摘要 实时逼真的三维虚拟人的皮肤变形技术是计算机动画的重要研究方向之一。基于切面轮廓线进行操作的交叉截面皮肤变形方法由于速度快及良好的连续性被广泛地使用。但在自由度变化大的关节处难以表达细微的皮肤结构。基于此, 在自由度变化较大的关节处通过增加截面的方法进行补偿来表现细微的皮肤变形, 取得了预期的效果。该方法解决了关节处皮肤变形的失真效果, 并且没有降低实时性, 获得了理想的皮肤变形效果。

关键词 [三维虚拟人](#) [皮肤变形](#) [交叉截面](#) [自由度](#)

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Skin deformation method of 3D virtual human based on increasing sections at joints

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Abstract

The real-time and realistic skin deformation of 3D virtual human is one of the most important research fields in computer animation. A skin deformation method based on cross-sectional contour is widely used because of its quick speed and good continuity. But it is difficult to express the slight skin deformation at the joints whose freedom degree changes largely. Thus, a method of increasing the sections at such joints to express the slight skin deformation is introduced and it gets anticipative effect. This method can solve the distortion problem of skin deformation at joints, and not reduce the real time. Ideal skin deformation can be obtained by using this method.

Key words [3D virtual human](#) [skin deformation](#) [cross-sectional contour](#) [freedom degree](#)

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