

博士论坛

自由特征模型参数化研究

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摘要 为了更高效直观地对自由特征形状进行建模, 对自由特征形体及自由特征定义点进行参数化, 提出了一种通过封装参数和约束创建自由特征体特征的方法。在自由特征形状的定义中, 建立数值参数和最终特征形状几何属性的映射关系。在轨迹线上提取特征定义点, 在各点处建立横截面, 对横截面进行蒙皮和扫掠运算, 生成和基曲面无缝连接的自由形状体特征。

关键词 [自由特征](#) [参数化](#) [约束求解](#)

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Research on parameterization of freeform feature model

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Abstract

To find effective and intuitive ways of modeling with freeform feature, freeform feature and freeform feature definition points are parameterized in this paper, a new method of creating freeform feature with wrapping parameters and constraints is presented. Mapping from numerical parameters to geometry is defined in the definition of freeform feature. Feature definition points are picked up on a trajectory, and a cross-section is built on each points, then skinning and sweeping operation are applied on these cross-section, as a result freeform feature fitting seamlessly to the target surface is built.

Key words [freeform feature](#) [parameterization](#) [constraint solving](#)

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