图形、图像、模式识别

具有变动边界的过渡面的热传导方程构造法

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摘要　　提出过渡面的热传导方程构造方法。使用热传导方程、初值条件和变动的边界条件，得到过渡面的偏微分方程模型，再利用分离变量法或者数值方法得到模型的解，则方程的像空间就是满足连续性要求的过渡面。数值实验也表明这种方法是可行的、有效的。

关键词　　过渡面　偏微分方程　几何造型

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Constructing method of blending surfaces by heat equation with fluctuant boundary

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Abstract

The constructing method of blending surfaces by heat equation with fluctuant boundary condition is researched.In different initial condition and fluctuant boundary condition，the representation of heat equation is used，such that the modeling of blending surfaces by heat equation is brought forward.The equation can be resolved by the segregation variable method or the numerical method，then the blending surfaces which satisfy C0 or C1 continuation can be achieved by the image space of the equation.The experimental results show that the model is effective and feasible.

Key words　blending surfaces　partial differential equation　geometric modeling

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