

## [2007-1156]Boundary Detection Using Open Spline Curve Based on Mumford-Shah Model

收稿日期 修回日期 网络版发布日期 2008-3-20 接受日期

摘要

关键词

分类号

## [2007-1156]Boundary Detection Using Open Spline Curve Based on Mumford-Shah Model

LI Xiao-Mao, ZHU Lin-Lin, TANG Yan-Dong

Abstract

Inspired by Cremers<sup>{,}</sup> work, we propose a novel method for open boundary detection, such as coastline, skyline in an image. It is based on B-spline function, curve evolution and the cartoon model of Mumford-Shah functional (M-S model). Because the object to be detected is an open curve in the image domain, two constraint equations are introduced into the M-S model. Thus the open boundary detection becomes a minimal partition problem. With the PDEs of control points and constraint equations, the curve will stop on the desired boundary. The method can be used to detect automatically a curve that separates an image into two distinct regions and is not necessarily defined by gradient, even if the image is very noisy. In additional, with two open curves our model can be extended to detect the belt-like object, such as rivers and roads.

Key words [open curve](#) [diffusion snake](#) [spline curve](#) [boundary detection](#) [M-S model](#)

DOI :

通讯作者

作者个人主

页

### 扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF \(3265KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [参考文献\[PDF\]](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [加入引用管理器](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中 无 相关文章](#)

▶ [本文作者相关文章](#)