

综述与评论

遥感图像自动道路提取方法综述

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摘要

自动道路提取是遥感图像识别的重要研究领域. 实现自动化、智能化、可靠准确的图像道路提取对地理信息技术发展具有重要的应用价值和意义. 道路的物理属性和功能形成了道路的辐射特征、几何特征、拓扑特征和背景特征. 以该四类特征为线索, 介绍了自动道路提取的典型方法, 侧重于分析四类特征在道路提取中作用和应用方式. 简要介绍了自动道路提取的评估方法和准则, 列举了主流的道路提取软件和遥感图像片源, 展望了该领域的发展方向.

关键词 [遥感图像](#) [道路模型](#) [道路图像特征](#) [自动道路提取](#) [效果评估](#)

分类号

A Survey of Automatic Road Extraction from Remote Sensing Images

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Abstract

Automatic road extraction is one of the most researched fields in object recognition from remote sensing images. It is of high importance to the development of geography information technology to achieve automation, intelligence, robustness, and accuracy in road extraction. Base on the physical properties and functions, there are four road image features: the spectral feature, the geometric feature, the topological feature, and the contextual feature. The major road extraction methods are summarized in this paper according to the four features. Their functions and roles in road extraction of the four features are emphasized. The evaluation method for road extraction is also introduced along with the popular road extraction software and sources of remote sensing image. The trend of the research is outlooked at the end of this paper.

Key words [Remote sensing image](#) [road model](#) [road image feature](#) [automatic road extraction](#) [performance evaluation](#)

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