

工程与应用

## 基于启发式搜索的车道线识别算法研究

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**摘要** 在车道边界识别中,边界点的提取是关键,常用的边界点提取方法因对噪声的抑制能力不强产生较多噪声点,从而影响识别效果。提出一种边界点启发式搜索算法,根据梯形匹配模型、车道线灰度变化特征和实际车道宽度约束,确定搜索的起始点,从起始点根据度量代价准则函数搜索车道边界点。采用直线道路模型结合Hough变换来拟合车道边界。实验表明,该算法实时性好、可靠性强、鲁棒性高。

**关键词** [启发式搜索](#) [智能车辆](#) [机器视觉](#) [车道线识别](#)

分类号

## Study on lane mark identification algorithm based on heuristic search

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### Abstract

Extracting the lane edge point is the key technology for lane marks identification.The method in common use often produces many noise points for lacking of restraint ability to noise.In that way it will bring departure during the lane boundary matching process and the identification result is bad.In this paper the tracking algorithm based on heuristic search is proposed.The starting point is positioned according to the trapezia matching model,gray change property of lane markings and the restraint of real lane width.Then we search the lane edge point from the start point with the tolerance cost rule function.The lane boundary is matched by Hough transform with linear model.Experimental results prove that the algorithm is robust and can fulfill the real time requirement of road identification.

**Key words** [heuristic search](#) [intelligent vehicle](#) [machine vision](#) [lane mark identification](#)

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