

## عنوان مقاله:

A New Parametric Linear Adaptive Color Space and its PCA-based Implementation

## محل انتشار:

نهمین کنفرانس سالانه انجمن کامپیوتر ایران (سال: 1382)

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## خلاصه مقاله:

In many vision applications, color is an important cue that must be applied very fast. In this paper, after giving a brief review on 12 different standard color spaces, the proposed parametric linear adaptive color (PLAC) space is defined. A color-based segmentation process is performed on these color spaces. Experimental results show that the PLAC can be applied at least three times faster than the standard color spaces. In addition, with 10% higher distinguishing power, the PLAC shows the fail rate of half as much of the standard spaces. The best advantage of the PLAC is its ability to remove the entire background in 75% of the objects; compared to the low 1.69% of the standard spaces. As the PLAC needs the semiautomatic tuning stage, the proposed PCA-PLAC method is introduced encapsulating the advantages of the PLAC with less required user supervision even than the standard color spaces. The results show the superiority of the proposed color spaces, while the PCA-PLAC even outperforms the PLAC.

## کلمات کلیدی:

Adaptive color space, principle component analysis, color segmentation, color perceptions, color attributes

## لینک ثابت مقاله در پایگاه سیویلیکا:

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