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科研论文

本期封面图片由陆军军医大学尹立建(180645)提供

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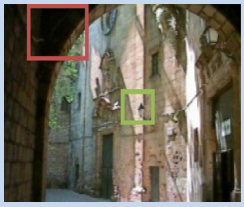
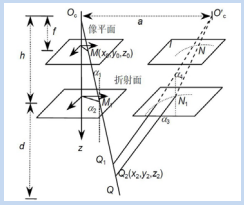


Details preserved brightness equalization algorithm for non-uniform illumination images

180439

Xi Jiaqi, Chen Xiaodong, Wang Yi, Cai Huaiyu, Sun Gang, Yang Yunsheng

In order to overcome the limitation of current image enhancement algorithms for non-uniform illumination images, a brightness equalization algorithm was proposed to preserve the detail information in low illumination region and normal illumination region at the same time.

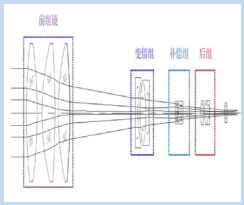


An underwater stereo matching method based on ORB features

180456

Li Jiakuan, Sun Chunsheng, Hu Yiming, Yu Hongzhi

Since the traditional algorithm may cause problems such as slow running speed and more mismatching points when perform stereo matching on underwater environment, the ORB characteristics detection and curve restriction was applied.

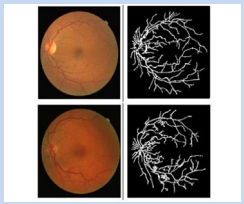


Research on a 30 times ratio continuous zoom television optical system adjustment technology

180462

Zhang Xiangming, Wang Zhongqiang, Chang Ming, Li Yuxi, Jiang Feng, Wang Zhangli, Ma Li, Zhao Wei

Aiming at the problem of high tolerance sensitivity and difficult adjustment of 30 times continuous zoom TV, the mechanical centering tooling was used to make the central axis of the moving assembly parallel to the axis of the guide rod, and the optical axis of all components was corrected by the optical axis of the front mirror group.

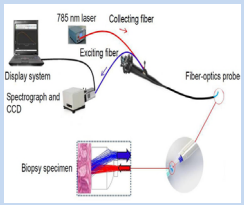


Retinal vascular segmentation combined with PCNN and morphological matching enhancement

180466

Xu Guangzhu, Wang Yawen, Hu Song, Chen Peng, Zhou Jun, Lei Bangjun

Aiming at the problem of large workload and strong subjectivity for manual retinal vessels extraction, a retinal vessel segmentation method that combines regional growing strategy, pulse coupled neural network (PCNN), a Gaussian filter bank and a Gabor filter were proposed.



A feasibility study of using fiber-optic Raman spectrum system for fast diagnosis of gastric cancer

180645

Yin Lijian, Rao Yunjiang, Dai Jianhua, Ran Zengling, Li Zhuoyue, Chen Yao, Peng Guiyong

A method for fast diagnosing gastric cancer was proposed by combining optical fiber Raman spectroscopy system matching the gastroscope with the ratios of the spectral integral energy.