

عنوان مقاله:

A Robust Camera-Projector Calibration Method to be Used in Vein Contrast Enhancement Systems

محل انتشار:

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نویسندگان:

Jafar Shahsavari - *Isfahan University of Technology*

Behzad Nazari

Niloofar Gheissari

خلاصه مقاله:

In many applications in image processing, we need to use a camera and projector together. The first step in these applications is calibrating the projector and the camera. In our application (to make a system to visualize body veins), we need to calibrate them on a nonplanar surface. Furthermore, it is possible that bothersome factors, noise, low contrast and nonuniform illumination to be present in camera-taken images. This makes corner extraction a non trivial task. In this paper a camera-projector calibration method is presented that is robust to the above factors. Then the corresponding corners between the projector image and camera image are used to find the transformation function between the two images. Since the surface of interest (the body skin) is not planar, nonplanar or local transformations are needed in this application. Finally some quantitative measurement is applied to evaluate the performance of the transformation function

کلمات کلیدی:

Camera-projector calibration; camera calibration; calibration; vein visualizing; vein contrast enhancement

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