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Volume 8, Issue 2, November 2017, Pages 420-427**Enhanced vein detection from video sequences** (Article)

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Abstract

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Nowadays, infusion of a needle is everyday common practice for the medical practitioner. A numerous fault occurs at the time of needle infusion into the blood vessel which is covered inside the human skin even though it is a simple and common practice in medical practitioning. This research proposes a computer-aided new technique using the vision-based imaging and Contrast Limited Adative Histogram Equalization (CLAHE) to detect and visualize the vein beneath a human's skin from video sequences which will be a really cost effective solution. IR night vision camera is being used to acquire the videos of an arm to compute the effect electromagnetic effect from NIR illumination which is absorbed by the hemoglobin of the blood vessel tissues. More precisely, its application can lead the process not only for error-free infusion of a needle to the patients but also localization of abdominal bleeding, stroke-inducing clots in the vein are the name of few. © 2017 Institute of Advanced Engineering and Science. All rights reserved.

Author keywords

[CLAHE](#) [Infusion of needle](#) [IR night vision](#) [Vein detection](#) [Video](#)

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