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Method for Reconstructing Two Component Velocity Fields from Ultrasound Color Doppler Scans.

A fast and robust algorithm enhances the accuracy and efficiency of ultrasound color Doppler scans by improving the visualization of cardiovascular blood flow for better detection of abnormalities.

A Doppler ultrasound is a test that uses high-frequency sounds to measure blood flow rate. They are used to detect abnormal flow within arteries and veins. There are numerous methods of reconstructing velocity vector fields from Doppler scan data; however, there is potential for more accurate and efficient ultrasound color Doppler scans.

Researchers at Purdue University have developed an algorithm which improves visualization of cardiovascular blood flow from ultrasound data. The objective of the technology is to transform the data into two velocity/vector components, which basically increases accuracy of the scans by enhancing visualization of blood flow in veins and arteries. This fast, robust algorithm would likely be used in hospitals to more accurately detect abnormal cardiovascular blood flow.

Advantages:

-Fast

-Robust

-Accurate

-Efficient

Potential Applications:

-Hospitals

TRL: 8

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