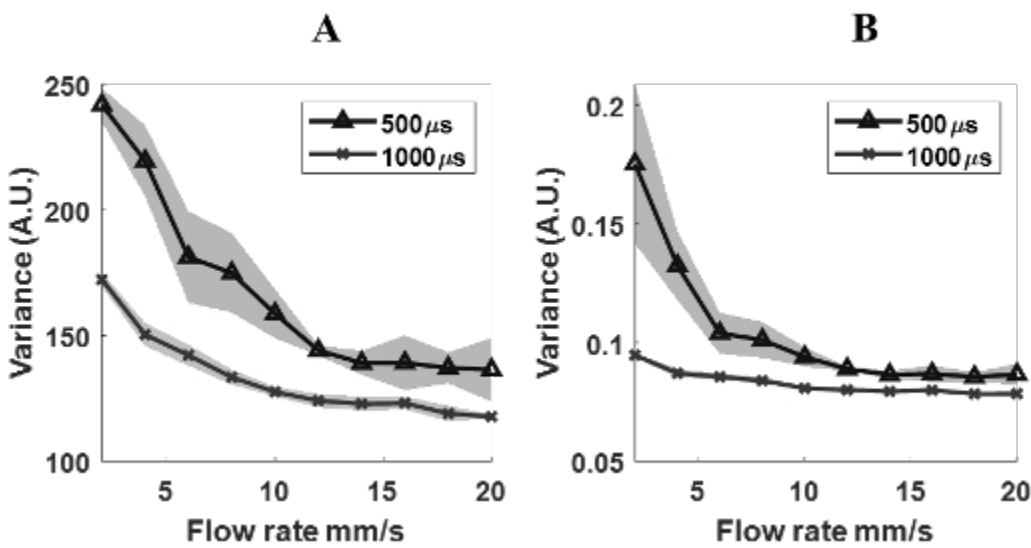


LSI imager prototype. An LSI camera was attached to the computer chip.



Average variance within ROI plotted for temporal (A) and spatial images(B) for two exposure times 500 μ s and 1000 μ s. Shaded regions represent +/- 1 standard deviation.

ADVANTAGES

The significant aspects of this novel device are:

- ▶ Simultaneously provides spatial and temporal variance images.
- ▶ It is possible to visualize flow regimes.
- ▶ The system is robust and efficient allowing for low-latency data processing that is important for real time image processing.
- ▶ Can be used with existing display technologies (e.g., smartphones), furthering the technology's portability, adaptability and usability in various, relevant usage situations.

SUGGESTED USES

Applications that could benefit from this inexpensive, hand-held LSI device invention are:

- ▶ Point-of-care tissue analysis
- ▶ Intraoperative and perioperative applications
- ▶ Wound management
- ▶ Identifying ischemic occlusions
- ▶ Reconstructive flap surgery
- ▶ Patients with peripheral artery disease

STATE OF DEVELOPMENT

The inventors have built a working prototype.

They are actively pursuing collaborators for optimization of the device and for testing with mice.

INVENTIONS BY DR. AGUILAR

Please review [all inventions by Dr. Aguilar and his team](#) at UCR

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