UNIVERSITY OF MINNESOTA
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Wearable ultrasound sensors for imaging and sensing

Novel wearable ultrasound transducers designed to integrate real-time imaging, sensing, and treatment functions for application in therapeutics and diagnostics.

IP Status: PCT Pending; Application number PCT/US2023/026985

Applications

- Monitoring neurovascular and neurological disorders
- Monitoring recovery of muscular disease

Technology Overview

Researchers at the University of Minnesota have developed wearable ultrasound transducers designed to gather both imaging and sensing data. In sensor mode, the device enables users to move freely while measuring properties such as vessel pulsation and tissue stiffness. When switched to imaging mode, the same transducer array provides more precise imaging under controlled conditions. The wearable nature of this device makes it suitable for various diagnostic and therapeutic applications in both home and clinical settings.

Phase of Development

TRL: 3-4
Proof of concept has been demonstrated.

Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

Please contact our office to share your business' needs and learn more.

Researchers

- **Emad Ebbini, PhD** Professor, Department of Electrical and Computer Engineering

References

1. Abhishek Sahoo, Steven Zhou, Collin Smith, Emad S. Ebbini(2022) , https://ieeexplore.ieee.org/document/9958787, https://ieeexplore.ieee.org/document/9958787

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