

POSTDOCTORAL RESEARCH ASSOCIATE: AUTONOMOUS ACOUSTIC HEMOSTASIS

Integrating Next-Gen Ultrasound Physics with Robotic Intervention

STOPPING NON-COMPRESSIBLE HEMORRHAGE IN EXTREME ENVIRONMENTS

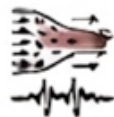


Conceptual Render: AI-Guided Robotic Hemostasis

DETECTION & INTELLIGENCE



SYSTEM HUB: Full-stack development on the **Verasonics Vantage NXT**.



FLOW IMAGING: Advanced and ultrafast flow imaging techniques for high-sensitivity hemorrhage detection.
e.g., SVD-based filtering and power Doppler for real-time quantification.



SIGNAL PROCESSING: Development of algorithms to isolate and quantify extravasation in real-time.

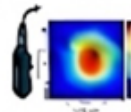
THERAPEUTIC INTERVENTION



CLOSED-LOOP CONTROL: Image-guided targeting in collaboration with Robotics Partner.



HIFU DELIVERY: Optimization of focal geometry for rapid, effective hemostasis.



PHYSICS VALIDATION: Acoustic field characterization and thermal modeling in tissue phantoms.

WHO YOU ARE

- ✓ **PhD in BME, EE, Physics, or related field.**
- ✓ **Verasonics Power User:** Deep MATLAB proficiency is essential.
- ✓ **Systems Intuition:** Experience closing the loop between hardware, data, and external actuators.
- ✓ **Mission-Driven:** Motivated by fieldable, life-saving medical technology.

APPLY NOW: Submit CV and research statement focusing on Verasonics/HIFU experience to:

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and Official Position Details

