Stanford

Jihye Baek

Postdoctoral Scholar, Radiology

Bio

HONORS AND AWARDS

- School of Medicine Dean's Postdoctoral Fellowship, Stanford University (2024 - 2025)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Rochester , Electrical and Computer Engineering (2023)

STANFORD ADVISORS

- Jeremy Dahl, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **A 2D autocorrelation-based frequency estimator reflecting spatial tissue distribution to improve Ultrasound H-scan tissue characterization.** *ArXiv*
  Baek, J., Brevett, T., Hyun, D., El Kaffas, A., Parker, K. J., Dahl, J. J.
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- **Improved Nondestructive Ultrasound Molecular Imaging With Lightweight Convolutional Neural Network.** *IEEE transactions on medical imaging*
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- **Renal cancer early diagnosis using a novel B7-H3 targeted ultrasound contrast imaging**
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- **Enhancing Ultrasound Molecular Imaging: Toward Real-Time RPCA-Based Filtering to Differentiate Bound and Free Microbubbles** *IEEE TRANSACTIONS ON ULTRASONICS*
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- **Real-Time Convolutional Neural Network for Nondestructive Detection of Targeted Microbubbles in Ultrasound Molecular Imaging**
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- **MBFormer: A Transformer model for 3D Time-Series Data Processing to Improve Bound Bubble Detection in Nondestructive Ultrasound Molecular Imaging**
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- **Sound Speed Contribution to Quantitative Ultrasound for Improving Liver Fat Assessment**
  Baek, J., Frey, B., Guardado, L., Dahl, J. J., IEEE
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- **Ultrasound Molecular Imaging: A Quantitative Metric for Vascular-Independent Targeted Microbubble Binding**
  Hashemi, H. S., Baek, J., Nguyen, N., Natarajan, A., Tabesh, F., Paulmurugan, R., Dahl, J. J., IEEE
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- **Multiparametric quantification and visualization of liver fat using ultrasound.** *WFUMB ultrasound open*
  Baek, J., Kaffas, A. E., Kamaya, A., Hoyt, K., Parker, K. J.
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- **Enhancing Ultrasound Molecular Imaging: RPCA-Based Filtering to Differentiate Tumor-Bound and Free Microbubbles**
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- **Nondestructive ultrasound molecular imaging based on a neural network approach utilizing post-processed ultrasound images**
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- **CLUSTERS OF ULTRASOUND SCATTERING PARAMETERS FOR THE CLASSIFICATION OF STEATOTIC AND NORMAL LIVERS** *ULTRASOUND IN MEDICINE AND BIOLOGY*
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