Title: Practical Tips, Tricks, and Optimizations for Ultrasound Beamforming and Image Reconstruction

Summary

Understand the core theory behind beamforming and image reconstruction. Identify modern trends in beamforming, such as transmit aperture synthesis. Implement image reconstruction using raw ultrasound signals, including practical considerations like computing "time zero," adjusting sound speed, and avoiding aliasing. Make key optimizations, such as demodulation, decimation, and baseband focusing.

Details

Learning Objective(s)
After watching this activity you should be able to:
- Understand the core theory behind beamforming and image reconstruction;
- Identify modern trends in beamforming, such as transmit aperture synthesis;
- Implement image reconstruction using raw ultrasound signals, including practical considerations like computing "time zero," adjusting sound speed, and avoiding aliasing; and
- Make key optimizations, such as demodulation, decimation, and baseband focusing.

Faculty: Dongwoon Hyun, PhD

Available Credit: 1 *AMA PRA Category 1 Credit(s)™/*1 ARRT Category A Credit(s). Upon completion of the learning activity, you will have 1 attempt to successfully pass the post-test with a score of at least 80% and claim your certificate.

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CME Information

Release Date: 06/25/2021
Expiration Date: 06/25/2024

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