



Contribution ID: 4

Type: **not specified**

## Ultrasound Tomography for Breast Cancer Screening and Diagnosis

*Monday, June 27, 2022 2:20 PM (20 minutes)*

Ultrasound tomography (UST) is an imaging modality that implements solutions of the acoustic wave equation to deliver 3D imaging of various tissue properties in support of breast cancer imaging. Our group has led a series of studies to test the efficacy of UST in a clinical setting, culminating in a recently completed, multi-center, national trial aimed that resulted in pre-market approval from the FDA for breast cancer screening. The screening trial demonstrated that adding UST to mammography improved sensitivity by 20% and specificity by 8% for women with dense breasts. The improved performance helps fill a gap for women who are at higher risk for breast cancer and for whom mammography performs poorly.

Results from studies relating to breast cancer screening, diagnostics, risk assessment and treatment monitoring are also presented. These results suggest a possible role for UST, not only in screening but also in the management of breast cancer.

The challenges of translating UST from bench to bedside in a regulatory setting and the associated commercialization of the technology are also described.

Finally, future prospects for applications of UST and potential collaborations are also discussed.

### Preferred Contribution Type

Presentation

**Author:** Prof. DURIC, Neb

**Presenter:** Prof. DURIC, Neb