

MEMS Ultrasound Technology: History, Emerging trends and Applications

The healthcare market is the newest driver of opportunities in the MEMS industry with health mobility being one of the emerging applications. Piezoelectric micromachined transducers (PMUT) represent a novel approach for the construction of miniaturized, low-power portable ultrasound imaging systems and catheter transducer arrays. Medical ultrasound applications will need smaller form factors, larger and cheaper arrays and integration with driver circuitry for 3D imaging. Piezoelectric micromachined transducers are well suited for medical applications such as general ultrasound imaging probes, catheters or sensors due to their low cost, high volume manufacturing, high levels of integration and miniaturization. This talk will describe the key factors fostering adoption of MEMS devices with the example of CMUT and PMUT devices penetrating the medical imaging market. The demand for better technology to monitor and improve the continuum of care continues to drive opportunities for entrepreneurs to disrupt the current standards. This talk will also discuss the landscape of players and the associated technology choices for CMUT or PMUT with insights on the market opportunities and trends.