3-D Imaging Using Row-Column Addressed Arrays With Integrated Apodization

The front cover shows results from two companion papers describing 3-D imaging using row–column-addressed arrays with integrated apodization. The apodization is incorporated in a CMUT array (top) with an optimized layout designed to reduce edge effects. A row–column-specific beamformer is developed, and imaging without ghost echoes induced by edge effects is presented (bottom). For further reading, please see the papers on pages 947 and 959 of this issue.

Images courtesy of Thomas Lehmann Christiansen, Morten Fischer Rasmussen, Jan Peter Bagge, Lars Nordahl Moesner, Jørgen Arendt Jensen, and Erik Vilain Thomsen. T. L. Christiansen and E. V. Thomsen are with the Department of Micro- and Nanotechnology, Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark. M. F. Rasmussen and J. A. Jensen are with the Center for Fast Ultrasound Imaging, Department of Electrical Engineering, Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark. J. P. Bagge and L. N. Moesner are with BK Medical ApS, Analogic Ultrasound Group, DK-2730 Herlev, Denmark.