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Jennifer L Mueller* (mueller@math.colostate.edu), Department of Mathematics, Colorado State University, Fort Collins, CO 80523. *D-bar Methods for Functional Pulmonary Imaging with Electrical Impedance Tomography.*

D-bar methods are a class of direct (noniterative) reconstruction methods for EIT based on complex geometrical optics solutions to a partial differential equation related to the governing mathematical model for the physical problem. In this talk, new advances in their practical use for functional pulmonary imaging will be described, and examples of reconstructions from clinical data will be shown. (Received September 21, 2015)