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Lixin Shen* (lshen03@syr.edu), Department of Mathematics, Syracuse University, Syracuse, NY 13244. *Simultaneously Inpainting in Image and Transformed Domains.*

In this talk, we focus on the restoration of images that have incomplete data in either the image domain or the transformed domain or in both. We propose an iterative algorithm that can restore the incomplete data in both domains simultaneously. We prove the convergence of the algorithm and derive the optimal properties of its limit by using convex analysis and tight framelet theory. Applications of the algorithm will be demonstrated. (Received August 25, 2008)