1009-94-221   **Erik M. Bollt**, **Andrea Hawkins**, **Triet Le** and **Peter F. Schultz***, Department of Mathematics, Clarkson University, Potsdam, NY 13699, and **Kevin R. Vixie**. *Information Divergence Between Different Image Denoising Algorithms.*

Many methods for removing noise from images have been proposed. In this study, we quantify the effectiveness of several different algorithms on various noise models and noise levels. We begin with a collection of natural noise-free images, and generate noisy versions of those images using several different noise models. Then we apply the denoising algorithms to obtain reconstructed images. Our comparison of the original, noisy, and reconstructed images takes into account not just how much closer the reconstructed image is to the original image than the noisy image is, but also incorporates information about the high-dimensional manifold of natural images. (Received August 16, 2005)