

Seminar on Imaging
Dominique Brunet, University of Waterloo
Thursday May 24, 4-5
On the Structural Similarity (SSIM) Index (abstract)
Fields Institute, Room 210

The Structural Similarity (SSIM) index is an image quality assessment measure. I will show how to find optimal approximation of redundant bases (i.e. frames) according to this SSIM index. This will be accompanied with an example of application to image denoising by generalizing Elad's K-SVD image denoising algorithm. This algorithm takes advantage of sparse representation of natural images in a certain dictionary of image patches.