Performance evaluation of typical approximation algorithms for non-convex Lp-minimization in diffuse optical tomography

The reconstruction code requires [NIRFAST](http://www.google.com/url?q=http%3A%2F%2Fwww.dartmouth.edu%2F%257Enir%2Fnirfast%2F&sa=D&sntz=1&usg=AFQjCNGy0Qj1Ase3wF2EPCnMRDNOteJ80A)

#MATLAB Implementation of Lp-norm based reconstruction: reconstruct\_stnd\_cw\_Lp (requires : adaptive\_opt\_lambda.m)

#MATLAB Implementation of Iteratively Reweighted L1 (IRL1) using Weighted-SALSA : IRL1\_Lp.m (requires: soft.m)

#MATLAB Implementation of Iteratively Reweighted Least-Squares (IRLS) : IRLS\_lp.m

#MATLAB Implementation of Iteratively Thresholding Method (ITM) : ITM.m

This MATLAB code is used as part of the work presented in:

Calvin B. Shaw and Phaneendra K. Yalavarthy "Performance evaluation of typical approximation algorithms for non-convex Lp-minimization in diffuse optical tomography," Journal of the Optical Society of America A: Optics, Imaging Science and Vision 31(4), 851-862 (2014).

**Additional Information:**

[Jaya Prakash\*, Calvin B. Shaw\*], Rakesh Manjappa, Rajan Kanhirodan, and Phaneendra K. Yalavarthy, “Sparse Recovery Methods Hold Promise for Diffuse Optical Tomographic Image Reconstruction," IEEE Journal of Selected Topics in Quantum Electronics (Issue on biophotonics) 20(2), 6800609 (2014). [CODE] [\*Equal Contribution]

Created on: October 1, 2013

\* The code does not come with any guarantees and can be freely used for any purpose. Please do cite relevant literatures mentioned in the MATLAB functions.