

# **Fast Iterative Soft Thresholding**

**Mathematical Models and Methods for Image  
Processing**

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# Assignments

- Implement the ISTA algorithm with backtracking to set the step size
- Implement the FISTA algorithm and test it with the toy example

## Reference:

Beck, Amir, and Marc Teboulle. "A fast iterative shrinkage-thresholding algorithm for linear inverse problems." *SIAM journal on imaging sciences* 2.1 (2009): 183-202.