Deep Accelerated Signal Processing (Week 5)

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Progress

Implemented a linear neural network to learn the step size η_k and thresholding value ζ_k for each iteration k

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- Problems with gradient stability, likely due to SVD
- Only implemented for the fully observed case

Prior Algorithm

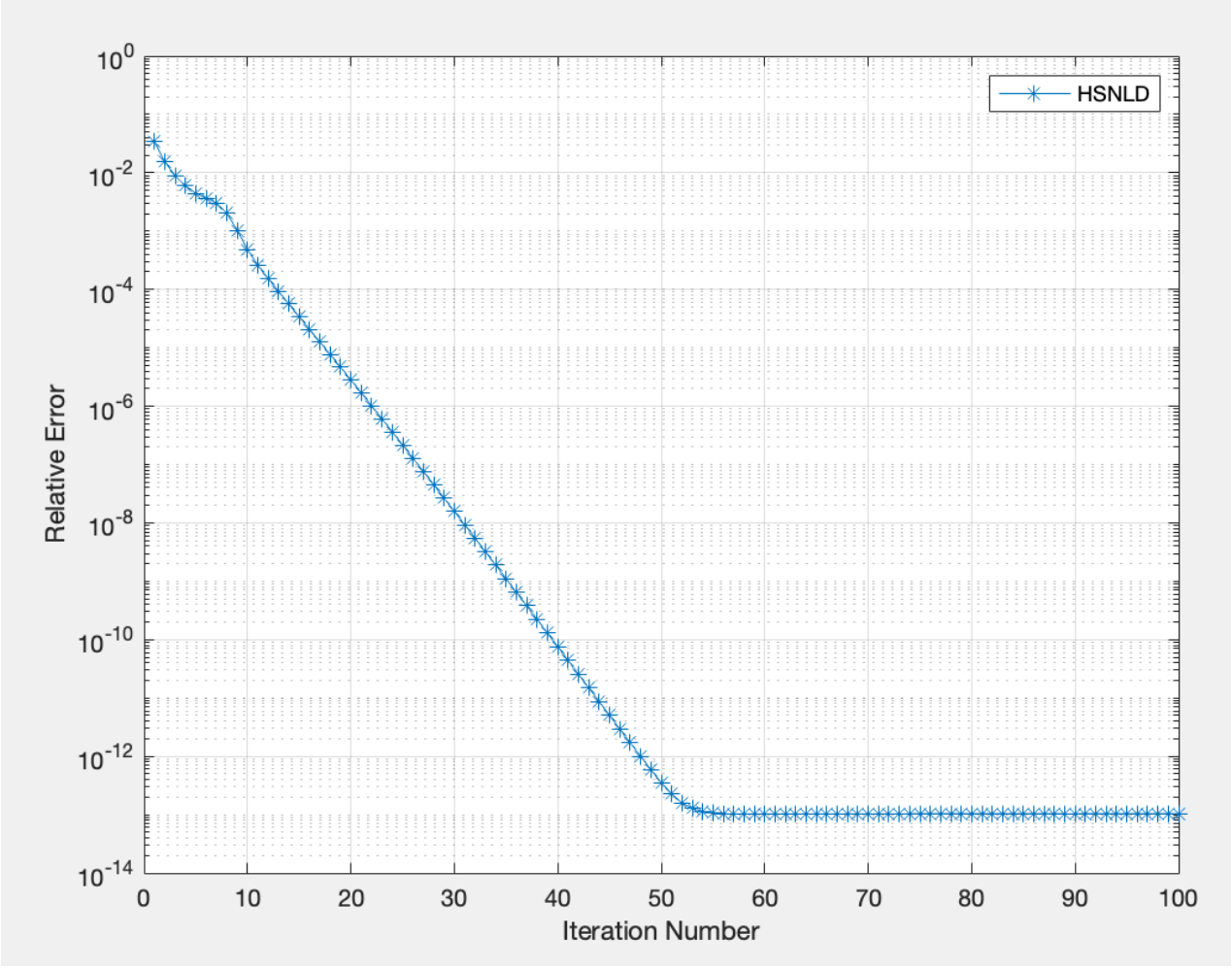


Figure: Loss of Dr. Cai's HSNLD with respect to iteration number, fully observed with $n = 4095$

Results of New Algorithm

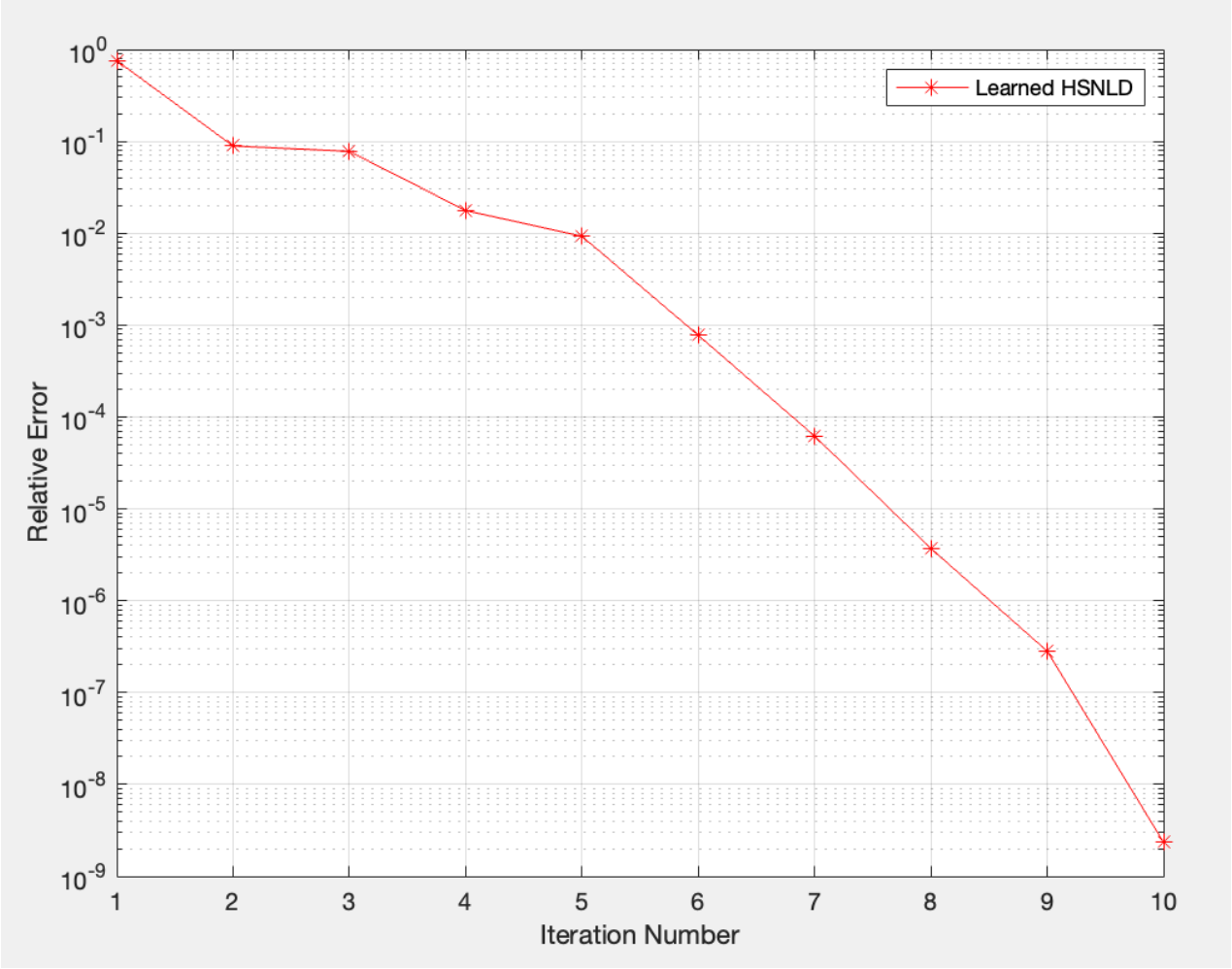


Figure: Loss of Learned HSNLD with respect to iteration number, fully observed with $n = 4095$ and $k = 10$

Next Steps

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- Identify possible reasons for mismatch between the training and test convergence rates

Thank You!

Questions?