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Sparse approximations in complex domain based on BM3D modeling

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Highlights

- Sparsity for complex-valued variables is introduced in the following three types: directly in the complex domain and for two real-valued pairs phase/amplitude and real/imaginary parts of complex variables.
- The nonlocal block-matching technique is used for sparsity implementation and complex-domain denoising filter design.
- These filters are based on the high-order singular value decomposition (HOSVD) exploited to generate group-wise adaptive analysis/synthesis transforms.
- The thorough study of the algorithms performance is produced.

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