IMPROVING PLUG-AND-PLAY CONVERGENCE WITH STEPSIZE SELECTION

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The Plug-and-Play (PnP) framework is a flexible approach that integrates advanced denoising techniques within iterative proximal optimization algorithms. Specifically, the proximal operator is replaced with an existing off-the-shelf denoiser, in order to embed complex image priors. Recent progress has been made to ensure the convergence of these algorithms, considering a specific class of denoisers expressed as gradient descent step of a potential function. These results provide a solid foundation for using both inertial and linesearch techniques to improve the convergence. The numerical results suggest that the proposed approach performs on par with state-of-the-art methods, achieving a fixed point solution with fewer iterations.