

# **The Unreasonable Effectiveness of Bregman Iteration for L1 Type Optimization**

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Bregman iteration has been around since 1967. It turns out to be unreasonably effective for optimization problems involving L1, BV and related penalty terms. This is partly because of a miraculous cancellation of error. We will discuss this and give applications, including, of course, compressive sensing and Total Variation based restoration.