

Using `ls_mat.m`

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- Run `Main.m` (in Matlab — Octave version available later) to generate a random point $\mathbf{x}_0 \in \mathbb{R}^2$ and call `jkfrV2.m` to solve the problem using a simple version of FR cgm.
- `jkfrV2.m` then calls `ls_V2.m` to find an α -value that satisfies the strong Wolfe conditions.
- You can and should experiment with changing the values of c_1 & c_2 at the start of `ls_V2.m`.
- The code is based on the pseudo-code in the paper “Algorithm 851: CG DESCENT, a Conjugate Gradient Method with Guaranteed Descent” by William W. Hager and Hongchao Zhang in ACM Transactions on Mathematical Software, Vol. 32, No. 1, March 2006, Pages 113-137. http://clas.ufl.edu/users/hager/papers/CG/cg_compare.pdf