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Math 278 - CCOM Seminar

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Line Search Algorithms for Projected-Gradient Quasi-Newton Methods

Abstract:

We briefly survey line search algorithms for unconstrained optimization. Next, we consider the search direction and line search strategies used in several algorithms that implement a quasi-Newton method for simple bounds, including algorithm L-BFGS-B. In this context, we discuss two currently-used line search algorithms and introduce a new method meant to combine the best properties of two different strategies. We present a modified L-BFGS-B method using the new line search and demonstrate its significant performance gains by numerical tests using the CUTer test set.

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11:00 AM

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