

1112-90-393

**Stephen J Wright\*** ([swright@cs.wisc.edu](mailto:swright@cs.wisc.edu)), Computer Sciences Department, University of Wisconsin, Madison, WI 53706, and **Adrian S Lewis**. *A Proximal Method for Composite Minimization.*

We consider minimization of functions that are compositions of convex or prox-regular functions (possibly extended-valued) with smooth vector functions. A wide variety of important optimization problems fall into this framework. We describe an algorithmic framework based on a subproblem constructed from a linearized approximation to the objective and a regularization term. Properties of local solutions of this subproblem underlie both a global convergence result and an identification property of the active manifold containing the solution of the original problem. Preliminary computational results on both convex and nonconvex examples are promising. (Received August 09, 2015)