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Gerard Awanou*, Northern Illinois University, Department of Mathematical Sciences, Watson 320, DeKalb, IL 60115. *Good numerical solutions of fully nonlinear elliptic equations*. Preliminary report.

While the theory of second order fully nonlinear equations has received considerable attention, there is a paucity of numerical methods capable of capturing singular solutions for these equations. We introduce an iterative method on which numerical methods can be based. We discuss convergence to the viscosity solution for the Pucci equation and illustrate the performance of the approach with numerical experiments for both the Monge-Ampere and Pucci equations. (Received March 07, 2011)