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LINEARIZATION OF THE P-POISSON EQUATION

This is a joint work with Massimo Fornasier and Maximilian Wank. In this talk we propose a iterative method to solve the non-linear p-Poisson equation. The method is derived from a relaxed energy by an alternating direction method. We are able to show algebraic convergence of the iterates to the solution. However, our numerical experiments based on finite elements indicate optimal, exponential convergence.