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**Modified projection method for solving a system of monotone equations with convex constraints.** (English) [Zbl 1225.90128](#)

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Summary: In this paper, we propose a modified projection method for solving a system of monotone equations with convex constraints. At each iteration of the method, we first solve a system of linear equations approximately, and then perform a projection of the initial point onto the intersection set of the feasible set and two half spaces containing the current iterate to obtain the next one. The iterate sequence generated by the proposed algorithm possesses an expansive property with regard to the initial point. Under mild condition, we show that the proposed algorithm is globally convergent. Preliminary numerical experiments are also reported.

**MSC:**

**90C30** Nonlinear programming

**15A06** Linear equations (linear algebraic aspects)

Cited in **5** Documents

**Keywords:**

monotone mapping; global convergence; projection method

**Software:**

STRSCNE; levmar

**Full Text:** [DOI](#)

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