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AN ITERATIVE METHOD FOR COMPUTING ZEROS OF OPERATORS SATISFYING AUTONOMOUS DIFFERENTIAL EQUATIONS

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Abstract. We use an iteration method to approximate zeros of operators satisfying autonomous differential equations. This iteration process has the advantages of the quadratic convergence of Newton's method and the simplicity of the modified Newton's method, as the inverse of the operator involved is calculated once and for all. Our local and semilocal convergence results compare favorably with earlier ones under the same computational cost.

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