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Dedicated to Costică MUSTĂŢA on his 60th anniversary

ON THE APPROXIMATION OF SOLUTIONS TO NONLINEAR OPERATORS BETWEEN METRIC SPACES

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Abstract. A Gauss-Seidel-type method for the solution of linear systems, based on the decomposition of the system matrix into four matrices blocks, hass been proposed by R. Varga in [3]. The convergence of this method was studied in [1] and [2].

In this paper we shall extend the ideas contained in the above quoted works to the case of nonlinear system equations.

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Keywords: system of equations with nonlinear operators in metric space, convergence, Gauss-Seidel iteration