Sapto Indratno* (sapto@math.ksu.edu), 1600 Hillcrest Dr#26, Manhattan, KS 66502, and Alexander G Ramm. Dynamical Systems Method for Solving Ill-conditioned Linear Algebraic Systems. Preliminary report.

A new method, the Dynamical Systems Method (DSM), justified recently, is applied to solving ill-conditioned linear algebraic system (ICLAS). The DSM gives a new approach to solving a wide class of ill-posed problems. In this paper a new iterative scheme for solving ICLAS is proposed. This iterative scheme is based on the DSM solution. An a posteriori stopping rules for the proposed method is justified. (Received September 22, 2010)