

GENERAL LINEAR METHODS FOR VOLTERRA INTEGRAL EQUATIONS

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We investigate the class of general linear methods of order p and stage order $q = p$ for the numerical solution of Volterra integral equations of the second kind. Construction of highly stable methods based on the Schur criterion is described and examples of methods of order one and two which are A -stable and have large regions of stability with respect to the convolution test equation are given.

This is a joint work with G.Izzo, E. Messina and E. Russo from the University of Naples.