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HIGH-ORDER MIMO INTERVAL SYSTEM REDUCTION USING DIRECT ROUTH APPROXIMATION METHOD

G.V.K.R.SASTRY AND M. SIVAKUMAR

Abstract

In this paper, the authors present a new method for the reduction of Large Scale MIMO Interval systems. Proposed method has an advantageous feature of avoiding the necessity of formulation of two arrays and use of recursive equations unlike earlier available interval system reduction methods [3,4]. The procedure yields stable reduced order interval model for a stable high-order interval system. Only one table "γ-table" needs to be formulated. The numbers of computations are proportional to the required order of the model. The proposed new method is computationally simple and direct when compared to most of the other available methods of model reduction of high order MIMO interval systems. The procedure is illustrated through a typical numerical example.