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# A NOVEL ORDER REDUCTION TECHNIQUE FOR HIGHER ORDER PLANTS WITH PARAMETRIC UNCERTAINTY

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**Abstract**

Several methods are available in International literature for the model reduction of high order systems with fixed parameters. Since last decade, much effort has been made in design, simulation and control of systems with parametric uncertainties for the entire range of operation. The stability of such interval or uncertain systems is governed by Kharitonov's theorem. Very few methods are available in literature for modeling of large-scale interval systems. In this paper, a new method for the reduction of Large Scale Interval Systems is presented. The proposed new method is computationally simple and direct when compared to most of the other available methods of model reduction of high order interval systems.

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**Keywords :** Modelling of Large Scale Interval Systems, Kharitonov, Parametric uncertainty