

## Model Order Reduction for Frequency Response and Effect of Order of Method for Matching Condition

**Authors :** Aref Ghafouri, Mohammad javad Mollakazemi, Farhad Asadi

**Abstract :** In this paper, model order reduction method is used for approximation in linear and nonlinearity aspects in some experimental data. This method can be used for obtaining offline reduced model for approximation of experimental data and can produce and follow the data and order of system and also it can match to experimental data in some frequency ratios. In this study, the method is compared in different experimental data and influence of choosing of order of the model reduction for obtaining the best and sufficient matching condition for following the data is investigated in format of imaginary and reality part of the frequency response curve and finally the effect and important parameter of number of order reduction in nonlinear experimental data is explained further.

**Keywords :** frequency response, order of model reduction, frequency matching condition, nonlinear experimental data

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