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REDUCED ORDER MODELS IN VIBROACOUSTICS

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ABSTRACT

The objective of the Mini Symposium “Reduced Order Models in Vibroacoustics” is to discuss the current progress and recent achievements in modelling structures for vibroacoustical problems.

Models, which are used to predict the sound pressure field in acoustic volumes for instance, often are very complex. Different material descriptions have to be implemented for elastic materials, porous foams and the acoustic fluid and the volume has to be built up in a numerical model, which leads to numerically expensive systems with a huge number of unknowns. In order to overcome these problems approaches are necessary to reduce the complexity of the models (e.g. [1,2]).

In this Mini Symposium the focus is laid on new and innovative approaches for reduced order models in the fields of Structural Mechanics and Vibroacoustics (but of course it is not limited to these aspects), where the computational effort can be reduced significantly providing the necessary accuracy of the results as well as improving the possibility to visualize physical phenomena and to assess the sensitivity.

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