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# Model order reduction for differential algebraic machine tool models with geometrically local non-linearities

## Content

In this contribution, advanced modeling of thermo-mechanical effects in machine tools with non-linear machine components is investigated using the example of a feed axis. Strategies of model order reduction for this coupled thermo-mechanical model with nonlinear subsystem and moving loads are presented. Numerical investigations of the performance of the resulting reduced order model compared to the original one conclude the presentation.

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