JOHANNES KEPLER UNIVERSITY LINZ

Johannes Kepler University Linz
Institute of Numerical Mathematics
Univ.-Prof. Dr. Herbert Egger

NUMA
INSTITUTE OF NUMERICAL MATHEMATICS

Talk announcement

Felix Engertsberger
(NuMa)

Thursday, March 6, 2025
10:15, S2 346

Reduced basis methods for the simulation of electric machines

We present an efficient simulation approach for electric machines using the reduced basis method, where harmonic mortar method is applied to account for the rotation. By applying a Schur complement technique, we reduce the problem to a system defined by the interface degrees of freedom. To further reduce the problem, a greedy algorithm is employed to discard redundant modes. Finally, we validate the reduced model by comparing its performance against both the high-fidelity simulation and experimental measurements from an electric machine.