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Vortragsankündigung

Seminar Regelungssysteme LV 0430L654

Dienstag, 22. September 2015, 11:00 Uhr
Vortragsort: EN 223

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Computational Methods in Systems and Control Theory,
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“Efficient Structure-Preserving Model Order Reduction for Multi-Agent Systems”

Simulation and control of large-scale dynamical systems often require model order reduction techniques. Additionally, certain structure-preservation is preferred during the reduction of network systems. In this talk, we will show established results about using graph partitions for preserving network structure and consensus property in model order reduction of multi-agent systems. Then we will introduce and demonstrate an efficient method for \mathcal{H}_2 -(sub)optimal model order reduction using graph partitions. The method is based on the Iterative Rational Krylov Algorithm and the QR decomposition with column pivoting as the clustering algorithm.