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In 2020 of the **MAGdeburg Lectures on Optimization and Control** by the SIAM Student Chapter Magdeburg and given by Prof. Marko Jek, Croatia. The MALOC lectures are a special format, where researchers are invited to come to Magdeburg to present their latest research. If you are a student here in Magdeburg.

It will happen in person but be an online event, so feel free to join via Zoom connection ;-)

[https://www.uni-magdeburg.de/fakultat-03/stadrovi/nastavnici-i-suradnici/26-](#)

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mechanical systems. Vibration reduction is very important in the damping optimization. In damping optimization, the principal goal is to ensure optimal evanescence of system's solution (i.e. to minimize the energy). We consider different optimality measures for that purpose, which we discuss in the talk. In the talk we present problem formulation and give an overview of the results. In this talk we are focused on sampling-free model reduction of systems, and in particular, this can be also applied for model reduction of linear systems. We propose an approach that allow low-rank variation in the state matrix. We propose an approach for parameter space exploration. Instead, we represent the system with a set of basis functions that are nonparametric with a purely parameter-free representation. This system representation lends itself very well to the optimization of the cost function surrogates. We discuss this in detail for our approach on a class of numerical examples.

The event will start at 3.00 p.m..

<https://bbb.mpi-magdeburg.mpg.de/meeting/MALOC2020>

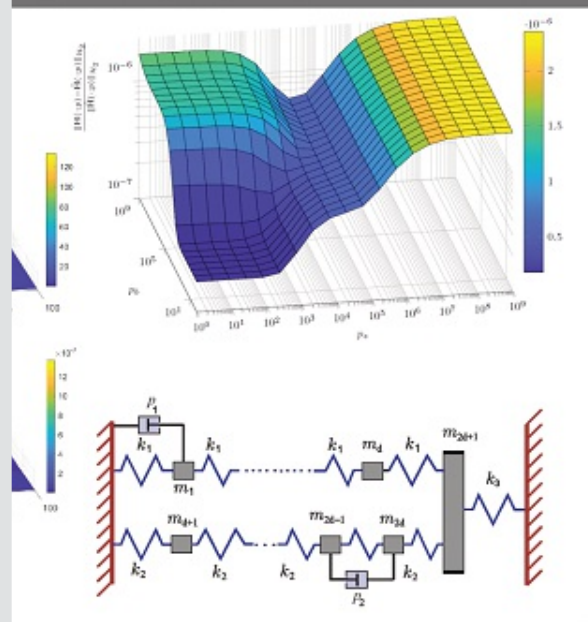
ization and Control

# Tomljanović

of Osijek

n mechanical systems  
odel reduction

0-16:30 Online-Event



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21.10.2020

**Organizational Meeting October**

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25.09.2020

**MAGdeburg Lectures in Optimization and Control**

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21.09.2020

**Officer Board Election 2020/2021**

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