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COUPLED PROBLEMS IN OPTIMSATION, CONTROL, AND UNCERTAINTY QUANTIFICATION

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ABSTRACT

Multi-physics problems are often solved in a partitioned manner, leading to coupling algorithms in the prediction of the system´s behaviour. Now prediction is typically only the first step in many other tasks such as optimisation and control, as well as uncertainty computations such as extreme events and Bayesian updating and identification.

The Minisymposium is devoted – but not limited – to the following topics:

- coupling algorithms

- reduced order models (ROMs) ans sparse representations for coupled problems

- control of multi-physics coupled problems

- optimisation of coupled problems

- uncertainty quantification of coupled problems

- Bayesian identification with coupled problems