

## MS 04

### Space and time discretization of coupled problems

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Coupled problems within the field of continuum mechanics are typically described by partial differential equations (PDEs). For many applications, an isolated consideration of single fields is not suitable; rather, the constitutive interrelation between the fields and corresponding parameters should be taken into account. For instance, a repeated electrically induced actuation could lead to a significant increase in temperature. Consequently, an isothermal approach can no longer be assumed. Coupled problems in the context of nonlinear elasticity have been studied, especially in the last few decades. Many types of coupled systems are increasingly important for realistic simulations. Special mention should be made of electromechanical simulations for actuation scenarios in the field of robotics. For dynamic problems, in particular, spatial and temporal discretization need to be considered, which is of special emphasis within this minisymposium.

In this minisymposium, modern spatial and temporal discretization techniques for coupled problems, which are currently under development, are discussed. To this end, possible topics for this minisymposium would be

- thermomechanical coupled problems,
- electromechanical coupled problems,
- thermoelectromechanical coupled problems,
- coupled problems in general,
- consistent space and time discretization.