

Minisymposium:

Coupled Multifield Problems and Smart Structures

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In most cases, complex real-world problems cannot be described by a purely mechanical approach only, a multi-field approach involving non-mechanical fields is required. Often adaptive structures based on intelligent materials are being used. These materials are very promising, since they can be applied in wide frequency and active displacement ranges. Application fields are e.g. biomechanics, actuator- and sensor technologies, smart wing, smart antennae etc.

Piezoceramic materials requiring electrical and mechanical coupling can be applied for e.g. high-frequency problems, electro-active polymers for problems involving chemo-electro-mechanics.

Papers focussing on actual research topics in the field of modeling, simulation and experimental verification of coupled multi-field problems especially involving smart materials will be welcome in this minisymposium.