

**Stefan Handschuh**

*"Optimization Problems in Contracted Tensor Networks"*

**Abstract:**

In this talk we discuss a calculus of variations in arbitrary tensor representations with a special focus on contracted tensor networks and apply it to functionals of practical interest. The survey provides all necessary ingredients for applying minimization methods in a general setting. The important cases of target functionals which are linear and quadratic with respect to the tensor product are discussed, and combinations of these functionals are presented in detail.