

## **Hierarchical Tensor Representation and Applications**

Stefan Kühn

Modern Tensor formats have shown to be applicable to a variety of problems in the field of applied mathematics, e.g. efficient representations and approximations of multivariate functions in high dimensions.

Often the choice of the adequate format is crucial for the efficient numerical treatment. We present the new Hierarchical Tensor Format and especially the concept of the truncation. We demonstrate the scope of the hierarchical approach on some examples.