Poster Session
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Tensor-based Algorithms for the Analysis of Data Similarity in a Blind System Identification Context.

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Tensors are higher-order generalizations of vectors and matrices that have favorable properties for signal separation and similarity. In this work, a complete tensor-based framework has been developed for blind system identification (BSI). This framework contains both existing and new methods, and uses coupled decompositions in order to obtain more accurate system estimates. Also, the uniqueness of the resulting tensor decompositions is investigated. Using this BSI framework, tensor-based algorithms for system similarity were developed as well. When it suffices to know whether systems are equal or not, these algorithms are faster and lead to well conditioned results.