

Complex identifiability and real identifiability

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A tensor is identifiable when it can be written uniquely as a minimal sum of decomposable objects. Identifiability of tensors is important for a correct recovering of mixed data in statistics, signal processing, etc... Recently, methods of projective geometry, introduced for the study of secant varieties, have been applied to determine the identifiability of tensors in several relevant cases. Usually, algebraic geometry deals initially with complex varieties, thus with complex tensors. I will discuss how the real projective geometry of secant varieties differs from the complex case, and I will delineate some examples in which real identifiability of real tensors can be recovered with a geometric analysis.