

Similarities between the embedding theory and mimetic gravity

Abstract

Based on recent works on mimetic gravity and the embedding theory I want to talk about the similarity between this two approaches. In mimetic gravity, which has recently become popular, a special substitution for a metric leads to the appearance in theory of additional dust matter without changing the usual Einstein-Hilbert action. A similar substitution occurs when considering gravity in the form of an embedding theory. In this case, the space-time is considered to be embedded into a flat ambient space of a larger number of dimensions, and the metric induced. Such an approach may be interesting, since it has a clear geometric sense, and the arising matter has richer properties.