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On Embedding Conditions

Friday 21 November 2025 14:00 (30 minutes)

We provide a survey of both existence results and explicit solutions for Local Isometric Embeddings into higher dimensional Euclidean and more general pseudo-Riemannian geometries. Of particular interest are recent results establishing that, for analytical spacetimes, the Euclidean co-dimension is at most two. This casts new light on the Karmarkar condition for class one pseudo-Euclidean embeddings and its analogues for class two embeddings into pseudo-Euclidean spaces, and more general embedding spaces, from which we derive a new embedding condition.

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