The Fundamental Theorem of Tropical Partial Differential Algebraic Geometry

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Given a partial differential equation (PDE), its solutions can be difficult, if not impossible, to describe.

The purpose of the Fundamental theorem of tropical (partial) differential algebraic geometry is to extract from the equations certain properties of the solutions.

More precisely, this theorem proves that the support of the solutions in $k[[t_1, \cdots, t_m]]$ (with k a field of characteristic zero) can be obtained by solving a so-called tropicalized differential system.

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