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Métodos de passos de tempo local para resolução numérica de equações diferenciais evolutivas utilizando análise multirresolução adaptativa: resultados preliminares

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Evolutionary partial differential equations have a great value in the study of some physical problems such as hydrodynamic and magneto-hydrodynamic equations. In this context, in the last decades, a lot of methods have been studied for simulating that equations in a efficient way. When there is an interest in localized phenomena in numerical simulations, adaptive tecniques have become very popular. Initially that tecniques was focused in the spatial part, such as grid refinement tecniques and multiresolution analysis, later the temporal part was included, with tecniques such as local time methods, currently being considered fully adaptive methods. This study presents a new local time method for higher order spatial adaptive approach.