

How to avoid order reduction when Lawson methods are used to solve linear initial boundary value problems

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The advantages of exponential methods for integrating in time partial differential equations are well known. Nevertheless, these methods can present a severe order reduction when they are used for integrating stiff problems. In this talk, we will show how it is possible to avoid this order reduction when integrating linear initial boundary value problems with Lawson exponential methods, even in the case of nonvanishing boundary conditions.