

Abstract

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The numerical solution of sixth-order boundary-value problems value problems by the Legendre-Galerkin method

There are few techniques available to numerically solve sixth-order boundary-value problems with two-point boundary conditions. In this paper we show that the Legendre-Galerkin method is a very effective tool in numerically solving such problems. The method is then tested on examples with non-homogeneous boundary conditions and a comparison with other methods are made. It is shown that the Legendre-Galerkin method yields better results.