

The Numerical Solution of a Two-point Boundary Value Problem With a Non-constant Coefficient by Means of Operator Interpolation Method

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The new numerical algorithms for a two-point boundary value problem with a non-constant coefficient are proposed. The Green function of the given problem is represented as a non-linear operator with respect to the coefficient. This operator is approximated by an operator interpolation polynomial of the Newton type ([1], [2]). For the inverse operators approximate formulas of different types are derived. The numerical algorithms and results of calculation of tests problems are given.

References

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