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 nonlinear operator with respect to the coefficient. This operator is approximated by an operator interpolation polynomial of the Newton type. The numerical algorithms and results of calculation of test problems are given.