

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. For the inverse operators approximate formulas of different types are derived. The numerical algorithms and results of calculation of tests problems are given.