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**SUBBOTIN'S SPLINES IN THE PROBLEM OF EXTREMAL INTERPOLATION
IN THE SPACE L_p FOR SECOND-ORDER
LINEAR DIFFERENTIAL OPERATORS****V. T. Shevaldin**

For second-order linear differential operators $\mathcal{L}_2(D)$ of the form D^2 , $D^2 + \alpha^2$, $D^2 - \beta^2$ ($\alpha, \beta > 0$), the Yanenko–Stechkin–Subbotin problem of extremal interpolation of numerical sequences by twice differentiable functions f with the smallest value of the norm of the function $\mathcal{L}_2(D)f$ in the space L_p ($1 \leq p \leq \infty$) is considered on a grid of nodes of the numerical axis that is infinite in both directions. Subbotin's parabolic splines and their analogs for the operators $D^2 + \alpha^2$ and $D^2 - \beta^2$ (with knots lying in the middle between consecutive interpolation nodes) are used to derive upper bounds for the values of the smallest norm in terms of grid steps for any value of p , $1 \leq p \leq \infty$.

Keywords: Subbotin's splines, interpolation, infinite grid, second-order differential operator.

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