

Difference analogues of embeddings of weighted Sobolev spaces

Ademi Ospanova

L. N. Gumilyov Eurasian National University, Astana, Kazakhstan

In the work we research the following space

$$w = \left\{ y = (y_j)_{j=0}^{\infty} : \|y; w\| = \left\{ \sum_{j=0}^{\infty} (\rho_j |\Delta y_{j-1}|^p + \nu_j |y_j|^p) \right\}^{1/p} < \infty \right\}$$

($1 < p < \infty$) which is a difference analogue of two-weighted Sobolev space. We consider embedding questions of w into the space $l_{q,u}$ of sequences.