

**ELLIPTIC EIGENVALUE PROBLEMS INVOLVING  
AN INDEFINITE WEIGHT FUNCTION***S. G. Pyatkov*

We study elliptic eigenvalue problems with indefinite weight function; i.e.; the problems  $Lu = \lambda g(x)u$  ( $x \in G \subset \mathbb{R}^n$ ) and  $B_j u|_\Gamma = 0$  ( $j = \overline{1, m}$ ), where  $L$  is a selfadjoint (in  $L_2(G)$ ) elliptic operator,  $g(x)$  is a measurable function changing sign in  $G$ , and  $\{B_j\}$  is a collection of boundary operators. Under consideration is the question on the unconditional basis property of eigenfunctions and associated functions of this problem in the space  $L_2$  with weight  $|g|$ .

*Key words and phrases:* elliptic eigenvalue problem, indefinite weight function, weighted Sobolev space, Riesz basis property.

*Pyatkov Sergej Grigor'evich*

Sobolev Institute of Mathematics,  
630090 Novosibirsk, Russia.

E-mail: pyatkov@math.nsc.ru

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