

Gennadiy A. Kalyabin

Peoples Friendship University Russia, Moscow, Russia

**On asymptotically sharp constants
in weighted Friedrichs inequalities for Sobolev spaces**

Bilateral estimates are obtained for best constants $A(n, q; v)$ in the inequalities

$$\|vf\|_q \leq A(n, q) \|f^{(n)}\|_2, \quad f \in C_0^\infty(-1, 1), \quad 0 < q \leq \infty$$

under certain restrictions on the weight function $v(x)$.