

OPTIMAL RECOVERY AND BEST QUADRATURES FOR HARDY–SOBOLEV CLASSES

KONSTANTIN YU. OSIPENKO

Denote by H_∞^r the class of analytic in the unit disk D functions f for which $|f^{(r)}(z)| \leq 1$, $z \in D$. Using a general approach for the construction of optimal recovery methods of linear functionals, we obtain optimal recovery methods and best quadrature formulas for Hardy–Sobolev classes H_∞^r . We find a linear space of analytic functions which play the same role as polynomials splines in the similar problem for Sobolev classes.