

Stanislav O. Chaichenko

Slavyansk State Pedagogical Univ., Ukraine

Approximation by Vallée-Poussin operators

The talk is devoted to approximation properties of the Vallée-Poussin operators for a wide collection of various function classes, which contains, on the one hand, the classes with divergent Fourier series and, on the other hand, the classes of infinitely differentiable, analytic and band-limited functions. This classification, which includes, in particular, the well-known classes of Weyl-Nagy and Sobolev, was introduced by A. I. Stepanets at the end of the last century. The solutions of some classical problems of approximation theory are obtained in the periodic case, in the case of locally integrable functions given on the real axis and in the case of functions of a complex variable represented in the form of the Couchet integral.