Balashova, G. S.

On extension of infinitely differentiable functions. (Russian) Zbl 0643.26015

Izv. Akad. Nauk SSSR, Ser. Mat. 51, No. 6, 1292-1308 (1987).

In this paper the author is continuing the work on extension of infinitely differentiable functions, initiated by E. Borel in 1895. Among others she investigates extensions with estimations $\max|f^{(n)}(x)|$ and $\|f^{(n)}(x)\|_{L_r(R)}$ $(1 \leq r \leq \infty)$. Moreover, conditions for extensions of boundary conditions of inward domains in $W^{\infty}\{a_n, p, r\}_{(0,\alpha)}$ and in $W^{\infty}\{a_\tau, p, r\}_{(R^\nu \times (0,\alpha))}$ are presented. The obtained results are too involved to be reproduced here, so for details we have to refer to the paper.

Reviewer: J.Abrycht

MSC:

26E10 C^{∞}-functions, quasi-analytic functions
46E35 Sobolev spaces and other spaces of "smooth" functions, embedding theorems, trace theorems

Keywords:

extension of infinitely differentiable functions