**Ul'yanov, P. L.**

**On classes of infinitely differentiable functions.** (English. Russian original) Zbl 0794.42004

Math. USSR, Sb. 70, No. 1, 11-30 (1991); translation from Mat. Sb. 181, No. 5, 589-609 (1990).

Summary: Sharp estimates are established for the relationships among the rate of growth of the derivatives of an infinitely differentiable periodic function, the behavior of its Fourier coefficients, and the trigonometric polynomials of best approximation to it.

**MSC:**

42A16 Fourier coefficients, Fourier series of functions with special properties, special Fourier series
26E10 $C^\infty$-functions, quasi-analytic functions
42A10 Trigonometric approximation

**Keywords:**

$2\pi$-periodic functions; Gevrey class; rate of growth; derivatives; infinitely differentiable periodic function; Fourier coefficients; trigonometric polynomials; best approximation

**Full Text:** DOI