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Titolo	Hardy-Littlewood and Ulyanov Inequalities
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Collana	Memoirs of the American Mathematical Society ; ; v.271
Classificazione	41A6342B1526D1046E3526A3341A1726C0541A10
Altri autori (Persone)	TikhonovSergey
Disciplina	515/.26
Soggetti	Inequalities (Mathematics) Hardy-Littlewood method Smoothness of functions Approximations and expansions -- Approximations and expansions -- Multidimensional problems Harmonic analysis on Euclidean spaces -- Harmonic analysis in several variables -- Multipliers Real functions -- Inequalities -- Inequalities involving derivatives and differential and integral operators Functional analysis -- Linear function spaces and their duals -- Sobolev spaces and other spaces of "smooth" functions, embedding theorems, trace theorems Real functions -- Functions of one variable -- Fractional derivatives and integrals Approximations and expansions -- Approximations and expansions -- Inequalities in approximation (Bernstein, Jackson, Nikol'skii-type inequalities) Real functions -- Polynomials, rational functions -- Polynomials: analytic properties, etc Approximations and expansions -- Approximations and expansions -- Approximation by polynomials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"May 2021, volume 271, number 1325 (second of 7 numbers)."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Auxiliary results -- Polynomial inequalities of Nikolskii-Stechkin-Boas- types -- Basic properties of fractional moduli of smoothness -- Hardy-

Littlewood-Nikolskii inequalities for trigonometric polynomials -- General form of the Ulyanov inequality for moduli of smoothness, K-functionals, and their realizations -- Sharp Ulyanov inequalities for K-functionals and realizations -- Sharp Ulyanov inequalities for moduli of smoothness -- Sharp Ulyanov inequalities for realizations of K-functionals related to Riesz derivatives and corresponding moduli of smoothness -- Sharp Ulyanov inequality via Marchaud inequality -- Sharp Ulyanov and Kolyada inequalities in Hardy spaces --  $(L_p, L_q)$  inequalities of Ulyanov-type involving derivatives -- Embedding theorems for function spaces.

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#### Sommario/riassunto

"We give the full solution of the following problem: obtain sharp inequalities between the moduli of smoothness  $f, t)_q$  and  $(f, t)_p$  for  $0 < p < q$ . A similar problem for the generalized K-functionals and their realizations between the couples  $(L_p, W_p)$  and  $(L_q, W_q)$  is also solved"

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