On Gagliardo-Nirenberg type inequalities

VIKTOR KOLYADA

Karlstad University, Sweden

ABSTRACT:

A joint work with F. J. Pérez Lázaro (Universidad de la Rioja). We prove Gagliardo-Nirenberg type multiplicative estimates for Lorentz norms of a function. These estimates are expressed in terms of norms of derivatives of a function and its homogeneous Besov norms of negative order. In particular, this gives a refinement of the well-known strong version of Sobolev embedding theorem involving Lorentz norms.