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An embedding theorem for Sobolev type functions with gradients in a Lorentz space.

(English) [Zbl 1176.26006](#)

Stud. Math. 191, No. 1, 1-9 (2009).

The author extends the Morrey embedding theorem: $|f(x) - f(y)| \leq cR^{1-n/p} \|\Delta f\|_{L^p(\mathbb{R}^n)}$, $|x - a| \leq R$, $|y - a| \leq R$, to the case when \mathbb{R}^n is replaced by a metric space with Radon measure having certain regularity and the L^p -norm is replaced by an appropriate Lorentz norm.

Reviewer: [Georgi E. Karadzhov \(Sofia\)](#)

MSC:

- [26D10](#) Inequalities involving derivatives and differential and integral operators
- [46E30](#) Spaces of measurable functions (L^p -spaces, Orlicz spaces, Köthe function spaces, Lorentz spaces, rearrangement invariant spaces, ideal spaces, etc.)
- [46E35](#) Sobolev spaces and other spaces of “smooth” functions, embedding theorems, trace theorems
- [26B30](#) Absolutely continuous real functions of several variables, functions of bounded variation

Cited in **1** Review
Cited in **3** Documents

Keywords:

[Lorentz spaces](#); [Sobolev functions](#); [differentiability](#); [absolutely continuous functions](#); [Orlicz spaces](#)

Full Text: [DOI](#)