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*L<sup>p</sup>-approximation of Jacobians*

Comment.Math.Univ.Carolinae 32,4 (1991) 659-666.

**Abstract:** The paper investigates the nonlinear function spaces introduced by Giacinta, Modica and Souček. It is shown that a function from  $Cart^p(\Omega, \mathbf{R}^m)$  is approximated by  $\mathcal{C}^1$  functions strongly in  $\mathcal{A}^q(\Omega, \mathbf{R}^m)$  whenever  $q < p$ . An example is shown of a function which is in  $cart^p(\Omega, \mathbf{R}^2)$  but not in  $cart^p(\Omega, \mathbf{R}^2)$ .

**Keywords:** Sobolev spaces, minors of the Jacobi matrix, weak and strong convergence, cartesian currents

**AMS Subject Classification:** 28A75, 73C50