University of Miami
Department of Mathematics
Seminar

Regularity results for some classes of higher order non linear elliptic systems

Maria Alessandra Ragusa

Dipartimento di Matematica e Informatica, Universitá di Catania

Viale Andrea Doria, 6 Catania Italy

maragusa@dmi.unict.it

Abstract

We treat the regularity problem for minimizers

$$u(x) : \Omega \subset R^m \to R^n$$

of quadratic growth functional

$$\int_\Omega A(x, u, Du)dx.$$

About the dependence on the variable x is assumed only that $A(\cdot, u, p)$ is in the class VMO, Vanishing Mean Oscillation class, as a function of x. Namely, is not assumed the continuity of $A(x, u, p)$ with respect to x.
Are considered both partial and global regularity of the minimizer u.

Keywords : Elliptic systems, regularity results, discontinuous coefficients.

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