University of Miami
Department of Mathematics
Seminar

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

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Abstract

We treat the regularity problem for minimizers

\[ u(x) : \Omega \subset \mathbb{R}^m \rightarrow \mathbb{R}^n \]

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.

Tuesday, June 28, 2016, 3:45 pm
411 Ungar Building, Coral Gables Campus