



UNIVERSITÀ DEGLI STUDI DI PERUGIA
DIPARTIMENTO DI MATEMATICA E INFORMATICA



Il giorno **Venerdì 2 Febbraio** alle ore **11:30** nella **Sala Riunioni** di questo Dipartimento il

Professor **Eugenio Rocha**

dell'Università di Aveiro terrà un seminario dal titolo

Quasilinear elliptic systems with measure data

di cui segue un breve riassunto.

Abstract: We study the existence of solutions of quasilinear elliptic systems involving N equations and a measure on the right hand side, with the form

$$\begin{cases} -\sum_{i=1}^n \frac{\partial}{\partial x_i} \left(\sum_{\beta=1}^N \sum_{j=1}^n a_{i,j}^{\alpha,\beta}(x,u) \frac{\partial}{\partial x_j} u^\beta \right) = \mu^\alpha & \text{in } \Omega, \\ u = 0 & \text{on } \partial\Omega, \end{cases}$$

where $\alpha \in \{1, \dots, N\}$ is the equation index, Ω is an open bounded subset of \mathbb{R}^n , $u : \Omega \rightarrow \mathbb{R}^N$ and μ is a finite Randon measure on \mathbb{R}^n with values into \mathbb{R}^N . Existence of a solution is proved for different sets of assumptions on $a_{i,j}^{\alpha,\beta}$. Examples are provided that satisfy our conditions, but do not satisfy conditions required on previous works on this matter. Related issues may also be discussed. This is a joint work with F. Leonetti (L' Aquila) and V. Staicu (Aveiro).