Analysis Seminar

On a quasilinear elliptic problem involving the $1-$Biharmonic operator and a Strauss type compactness result

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Abstract.

In this talk we will present the compactness of the embeddings of the space of radially symmetric functions of $BL(\mathbb{R}^N)$ into some Lebesgue spaces. In order to do so we prove a regularity result for solutions of the Poisson equation with measure data in $\mathbb{R}^N$, as well as a version of the Radial Lemma of Strauss to the space $BL(\mathbb{R}^N)$. An application is presented involving a quasilinear elliptic problem of higher-order, where variational methods are used to find the solutions.