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# EXISTENCE OF SOLUTIONS FOR SOME DEGENERATE SEMILINEAR ELLIPTIC EQUATIONS WITH MEASURE DATA

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**Abstract.** We study the existence of a weak solution for the degenerate semilinear elliptic problem

$$-\sum_{i,j=1}^{n} \mathrm{D}_j(a_{ij}(x)\mathrm{D}_i u(x)) - \lambda g(x)u(x) = -f(x,u(x)) + \mu \quad \text{in } \Omega$$

$$u = 0 \quad \text{on } \partial\Omega,$$

where $\Omega$ is a bounded open subset of $\mathbb{R}^N$, $N \geq 2$ and $\lambda$ is a real parameter. Here $g : \Omega \to \mathbb{R}$ and $f : \Omega \times \mathbb{R} \to \mathbb{R}$ are functions satisfying suitable hypotheses and $\mu$ is a Radon measure.

**MSC 2010.** 35J70, 47H05.

**Key words.** Degenerate semilinear elliptic equations, monotone operators, measure data.

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