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**Nonexistence of positive singular solutions for a class of semilinear elliptic systems.** (English)

Zbl 0853.35038

Electron. J. Differ. Equ. 1996, No. 08, 22 p. (1996).

Summary: We study nonexistence and removability results for nonnegative subsolutions to

$$\Delta u = a(x)v^p, \quad \Delta v = b(x)u^q \quad \text{in } \Omega \subset \mathbb{R}^n, \quad N \geq 3,$$

where  $p \geq 1$ ,  $q \geq 1$ ,  $pq > 1$ , and  $a$  and  $b$  are nonnegative functions. As a consequence of this work, we obtain new results for biharmonic equations.

**MSC:**

[35J60](#) Nonlinear elliptic equations

[31A30](#) Biharmonic, polyharmonic functions and equations, Poisson's equation in two dimensions

[35J20](#) Variational methods for second-order elliptic equations

[35J45](#) Systems of elliptic equations, general (MSC2000)

Cited in **6** Documents

**Keywords:**

[nonexistence](#); [subsolutions](#); [biharmonic equations](#)

**Full Text:** [EuDML](#) [EMIS](#)