1033-35-18 **Jaffar Ali***, Dept of Mathematics, Mississippi State University, Mississippi State, MS 39762, **Mythily Ramaswamy**, TIFR, Bangalore, 560012, India, and **Ratnasingham Shivaji**, Dept of Mathematics, Mississippi State University, Mississippi State, MS 39762. *Multiple positive solutions for classes of elliptic systems with combined nonlinear effects.*

We study the existence of multiple positive solutions to systems of the form

$$\begin{aligned} -\Delta u &= \lambda f(v), x \in \Omega, \\ -\Delta v &= \lambda g(u), x \in \Omega, \\ u &= v = 0, x \in \partial\Omega. \end{aligned}$$

Here Δ is the Laplacian operator, λ is a positive parameter, Ω is a bounded domain in R^n with smooth boundary and f, g belongs to a class of positive functions that have a combined sublinear effect at ∞. Our results also easily extend to the corresponding p-Laplacian systems. We prove our results by the method of sub and super solutions.

(Received July 16, 2007)