

# Positive solutions for a system with $p$ -Laplace-like operators, via blow-up

Raúl Manásevich

Santiago, Chile

In this talk we will consider the system

$$(\tilde{S}_r) \quad \begin{cases} -(r^{N-1}\phi(u'(r)))' = r^{N-1}a(u(r))f(v(r)) \\ -(r^{N-1}\psi(v'(r)))' = r^{N-1}b(v(r))g(u(r)) \\ u'(0) = v'(0) = u(R) = v(R) = 0, \end{cases}$$

where  $\phi$  and  $\psi$  are (odd) increasing homeomorphisms of  $\mathbb{R}$ ,  $R > 0$ .  $a, b, f, g : \mathbb{R} \mapsto \mathbb{R}$  are continuous functions, such that  $a(0) = 0$ ,  $b(0) = 0$ ,  $f(0) = 0$ ,  $g(0) = 0$ . Furthermore  $f(t) > 0$ ,  $g(t) > 0$ ,  $a(t) > 0$ ,  $b(t) > 0$ , for all  $t > 0$ .

We will be interested in existence of positive solutions via blow up method.