

# Large solutions for some nonlinear equations with a Hardy type singular term

Moshe Marcus

Technion - Israel Institute of Technology, Israel

**Abstract:** We consider equations of the form  $-L_\mu u + g(u) = 0$  in a smooth domain  $\Omega$ , where  $L_\mu = \Delta + \mu\delta^{-2}$  and  $\delta(x) = \text{dist}(x, \partial\Omega)$ . The nonlinear term is positive, increasing on  $\mathbb{R}_+$  satisfies the Keller-Osserman condition and some additional technical assumptions. The conditions are satisfied, in particular, by power and exponential nonlinearities. We shall discuss the question of existence and uniqueness of large solutions when  $\mu \geq 0$ .