

**Sign changing solutions of Lane-Emden problems:
asymptotic behavior and Morse index**

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We consider sign changing solutions of Lane-Emden Dirichlet problems in bounded domains. After recalling some properties of these solutions, the talk will focus on recent results about their asymptotic behavior as the exponent of the nonlinearity tends to a critical value p^* , namely $p^* = \infty$ in dimension $N = 2$ or $p^* = (N + 2)/(N - 2)$ if $N > 2$. It will be shown that the limit problems, which characterize the limit profile of the solutions, are different in dimension two or larger. In the case of least energy radial nodal solutions more precise asymptotic estimates can be given as well as a precise computation of the Morse index.