



**Dias 7 e 9 de Dezembro, às 14h, na Sala B3-01**

**“Stable and finite Morse index solutions on  $\mathbb{R}^N$ ”**

(two sessions of 45 m each)

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**Abstract:**

We discuss properties of these solutions for

$$-\text{div grad}(u)=f(u)$$

In many cases, we obtain rather complete information on these. We then use these results to study bounded domain problems for the same equation where the diffusion is small or the solutions are large. In particular, we sometimes obtain a rather complete understanding of the stable positive solutions when the diffusion is small. We also use our ideas to show that in a number of cases the branch of positive solutions has infinitely many bifurcations.

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