

## SEMINÁRIO DE ANÁLISE

**Sub-supersolution method for a quasilinear elliptic problem involving the 1–laplacian operator and a gradient term**

**Marcos Pimenta**  
UNESP

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**Abstract.** In this work we study a quasilinear elliptic problem involving the 1–laplacian operator and a gradient term. The problem requires the definition of a suitable sense of solution, which allows us to show the existence of a solution in  $BV(\Omega)$ , having no jump part. Despite the lack of regularity of the solutions, we develop a sub-supersolution approach, together with a thorough analysis of the distributional derivative of the functions in  $BV(\Omega)$ .