



SEMINÁRIO DE EQUAÇÕES DIFERENCIAIS PARCIAIS

**On the existence of a BV solution for an equation involving the
mean curvature operator**

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13/05/2025 (Terça - Feira)

16:00 horas

Sala 321 do IMECC

Resumo: In this work, we prove the existence of a bounded variation solution for a quasilinear elliptic problem involving the mean curvature operator and a sublinear nonlinearity. We obtain such solution as the limit of the solutions of another quasilinear elliptic problem involving a parameter $p > 1$ as $p \rightarrow 1^+$. The analysis requires estimates independent on p , as well as a precise version of the Euler-Lagrange equation satisfied by the solution.