

Semiconcave functions and their applications to PDEs and control theory

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Resumen

Semiconcave functions are a natural generalization of concave functions that retains most of the good properties known in convex analysis, but arises in a wider range of applications. The talk will describe some of the main properties of these functions, focussing on the structure of their singular sets. Applications to the calculus of variations and optimal control, as well as to Hamilton-Jacobi equation, will be given.