



SEMINÁRIO DE EQUAÇÕES DIFERENCIAIS PARCIAIS

Congested Traffic Dynamics Ruled by the Infinity Laplacian

Rafael Ramos Santos Costa

Universidade Federal do Rio Grande do Sul

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Resumo: In this talk, we explore the interplay between congested traffic dynamics and the mathematical structure of the infinity Laplacian. We introduce the concept of comparison with k -cones and establish its equivalence to solving highly degenerate PDEs governed by the infinity Laplacian within the framework of viscosity solutions, where only test functions with gradients greater than k are considered. Building on this progress, we derive local Lipschitz estimates for functions that satisfy comparison with k -cones. Additionally, we derive monotonicity properties that, through a detailed analysis, reveal that blow-up solutions are linear.