

26.03.2021

Monday's Nonstandard Seminar 26

15:00

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Title: Non Linear Mean Value Properties for Monge-Ampère Equations

Abstract: In recent years there has been an increasing interest in whether a mean value property, known to characterize harmonic functions, can be extended in some weak form to solutions of nonlinear equations. This question has been partially motivated by the surprising connection between Random Tug-of-War games and the normalized p -Laplacian discovered some years ago, where a nonlinear asymptotic mean value property for solutions of a PDE is related to a dynamic programming principle for an appropriate game.

Our goal in this talk is to show that an asymptotic nonlinear mean value formula holds for the classical Monge-Ampère equation.

Joint work with P. Blanc (Jyväskylä), F. Charro (Detroit), and J.J. Manfredi (Pittsburgh)