Dipartimento di Matematica - Università di Pisa

New trends in Partial Differential Equations and Applications

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A quantitative modulus of continuity in the two-phase Stefan problem

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The (two-phase) Stefan problem is a well-known mathematical model for the evolution of the configuration of a substance which is changing phase; one should think, for instance, of a piece of very cold ice melting in a lake. In this talk I am going to show how, using classic tools as the weak Harnack inequality and an appropriate alternative, one can provide an explicit, logarithmic-type modulus of continuity for local weak solutions.

This is a joint work with Tuomo Kuusi (Aalto University, Helsinki) and José Miguel Urbano (University of Coimbra).

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