

SEMINARIO DI GEOMETRIA

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Politecnico di Torino,
Dipartimento di Scienze Matematiche,
Online

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Vanishing Hessians, wild forms and their border VSP

Wild forms are homogeneous polynomials whose smoothable rank is strictly larger than their border rank. For forms of minimal border rank, we show that the condition of vanishing Hessian is equivalent to being wild. This answers a question of Buczyńska, Buczyński, and Ottaviani. The answer will entail structure tensors of smoothable and Gorenstein algebras.

Inspired by the recent work on border apolarity of Buczyńska and Buczyński, we shall also discuss border varieties of sums of powers of some wild forms in the corresponding multigraded Hilbert schemes. This is joint with H. Huang and M. Michalek.