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Symbolic powers in mixed characteristic

The Zariski-Nagata Theorem in one of its classical versions states that, if P is a prime ideal in a polynomial ring over the complex numbers, then the n -th symbolic power of P consists of all the polynomial functions that vanish to order at least n along the variety defined by P . We present analogous results in mixed characteristic, combining properties of differential operators and p -derivations. This talk is based on joint work with Eloísa Grifo and Jack Jeffries.