

Higher-order Image Conjecture for differential operators of polynomial algebras

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Abstract. The interest in images of differential operators of polynomial algebras arose from the research of the Jacobian conjecture. In this paper, we show that the *Higher-order Image Conjecture* (HIC(n)) holds for all dimensions $n \geq 1$ in the case of positive characteristic. We also show that HIC(1) holds for a class of differential operators in the case of characteristic zero.

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