

Periods of Hodge cycles and special values of Hypergeometric function

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In this talk we will describe a set of generators of the filtration of primitive cohomology for the family $x_1^{m_1} + x_2^{m_2} + \dots + x_n^{m_n} + y(1-y)(\tau-y)$ as well as a basis for the homology of the affine part. With this we will calculate some periods explicitly. As applications of these calculations and using the (1,1)- Lefschetz theorem we will find expressions involving the hypergeometric function such that they algebraic.