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Pluri-Hodge Decomposition and Associated Jacobian

mardi 12 décembre 2017 11:00 (50 minutes)

Summary

The deformational invariance of the m-genus, the dimension of $H^0(X; mK_X)$, is known for the case of a compact complex algebraic manifold X and is conjectured for the case of a compact Kähler manifold. For m=1, the deformational invariance in the Kähler case follows from the Hodge decomposition. The question arises whether $H^0(X; mK_X))$ for $m \geq 2$ is naturally a direct summand of the cohomology group of some flat bundle so that the deformational invariance of the m-genus can be explained in terms of such a "pluri-Hodge decomposition". The talk will discuss the question, starting with the case of a compact Riemann surface, and study the construction of jacobians associated to such a "pluri-Hodge decomposition" for a compact Riemann surface.

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