KÄHLER STRUCTURES ON QUANTUM IRREDUCIBLE FLAG MANIFOLDS

MARCO MATASSA

Abstract: Given a differential calculus on a non-commutative algebra, one can try to impose extra structures on it, inspired by classical complex geometry. One such example is the notion of Khler structure, which has been introduced and studied in detail for quantum projective spaces by Buachalla. In this talk we will show that Khler structures exist more generally on quantum irreducible flag manifolds (at least for deformation parameter close to 1). We will consider the differential calculi defined by Heckenberger-Kolb, and prove along the way that they can be made naturally into differential *-calculi.