

**Maps on positive definite cones of C^* -algebras
preserving the Wasserstein mean**

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In the past years, we have obtained some structural results for bijective maps between positive definite cones of operator algebras which preserve some specific Kubo-Ando means (power means, geometric mean).

Recently, Bhatia, Jain, and Lim have introduced a new mean for positive definite matrices called Wasserstein mean. Its importance lies in its close connection to the Bures-Wasserstein metric.

In this talk, we give the complete description of all (continuous) isomorphisms between positive definite cones of C^* -algebras with respect to the operation of the Wasserstein mean and present a result concerning the nonexistence of nonconstant such morphisms into the positive reals. Comments on the algebraic properties of the Wasserstein mean relating associativity are also made.