



Lajos Molnár (molnarl@math.klte.hu) Institute of Mathematics, University of Debrecen, 4010 Debrecen, Hungary, *Isometries of spaces of linear operators and probability distribution functions.*

ABSTRACT. The Banach-Stone theorem and its non-commutative extension due to Kadison describe the structure of all linear surjective isometries between spaces of continuous complex-valued functions and C^* -algebras, respectively.

In the first part of the talk we determine the structure of all linear (and non-linear) surjective isometries of the self-adjoint parts of von Neumann algebras with respect to a semi-metric called maximal deviation, a concept emerging in the mathematical foundations of quantum mechanics. In the second part we consider the (non-linear) space of all classical probability distribution functions and determine its surjective isometries with respect to certain statistical distances (Kolmogorov-Smirnov metric, Lévy metric).