

# Some Recent Advances & Open Problems on Perturbations and Extensions of Isometric Operators

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In this talk, some recent advances & open problems on perturbations and extensions of isometric operators are presented. For example, on the “strong-stability problem for the linear isometries” we obtain some positive results on the spaces  $B(E(2), L(m))$ ,  $B(E(n), C(K))$ ,  $B(L^\infty, (m))$  and  $B(X, L^\infty)$  (where  $X$  is uniformly smooth with  $\dim X = 1$  or  $\infty$ ) but what about for the space  $B(L^p, C(K))$ ? And on the “extension problem of isometry between the unit spheres of two Banach spaces” we obtain some positive results on the spaces  $B(H, B(l^p))$  and  $B(E, C(K))$  but what about for the isometry which is defined the sphere of  $E$  “into” (not “onto”) the sphere of  $F$ ? etc.