Characterization of Maps

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ABSTRACT

Let A and A' be two C^*-algebras with identities I_A and I'_A, respectively, and P_1 and $P_2 = I_A - P_1$ nontrivial projections in A. We study the characterization of multiplicative $*$-Lie-Jordan-type maps, where the notion of these maps arise in the first work. After, we solved two conjectures regarding $*$-Jordan-type maps and $*$-Lie-type maps. As an application we show that if M_A is a von Neumann algebra relative C^*-algebra A without central summands of type I_1 then every bijective unital multiplicative $*$-Lie-Jordan-type maps are $*$-ring isomorphisms.