Operators and Matrices
Volume 9, Number 2 (2015), 305–310
doi:10.7153/oam-09-17

COMMUTING TRACES ON INVERTIBLE AND SINGULAR OPERATORS

WILLIAN FRANCA

Abstract. Let $m \geqslant 1$ be a natural number, and let $B(H)$ be the Banach space of all bounded operators from a infinite dimensional separable complex (real) Hilbert space H to itself. We describe traces of m-additive maps $G : B(H)^m \to B(H)$ such that $[G(T,\dots,T),T] = 0$ for all invertible or singular $T \in B(H)$.

Mathematics subject classification (2010): 47A05,.
Keywords and phrases: Hilbert spaces, commuting traces, centralizing maps, invertible operators, singular operators.

REFERENCES

[1] W. FRANCA, *Commuting traces of multiadditive maps on invertible and singular matrices*, Linear and Multilinear Algebra, accepted.
[2] W. FRANCA, *Commuting maps on some subsets of matrices that are not closed under addition*, Linear Algebra Appl., **437** (2012), 388–391.
[3] P.-H. LEE, T.-L. WONG, J.-S. LIN, R.-J. WANG, *Commuting trace of multiadditive mappings*, J. Algebra, **193** (1997), 709–723.
[4] C.-K. LIU, *Centralizing maps on invertible or singular matrices over division rings*, Linear Algebra Appl., to appear.