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Cho-Ho Chu and **Bernard Russo*** (brusso@uci.edu). *On the Tits-Kantor-Koecher Lie algebra of a von Neumann algebra.*

Every Jordan algebra or triple can be embedded in a Lie algebra according to the well-known Tits-Kantor-Koecher (TKK) construction. For example, the TKK Lie algebras of the full matrix algebras (considered as Jordan algebras) are the classical Lie algebras of type C. Not surprisingly we identify the TKK Lie algebra of a finite von Neumann algebra M as the Lie algebra of finite sums of commutators of 2 by 2 matrices over M . We also show that every structural transformation (a generalization of triple derivation) on an arbitrary von Neumann algebra is inner. These results are by-products of our recent study of the cohomology of Jordan triples via the TKK Lie algebras. (Received August 17, 2015)