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Ryad Ghanam* (raghanam@vcu.edu), PO Box 8095, Doha, Qatar, 8095, Qatar, and **Gerard Thompson** (gerard.thompson@utoledo.edu), Toledo, OH 43606. *Non-solvable subalgebras of g* $L(4, R)$. Preliminary report.

All the simple, then semi-simple, subalgebras of $\mathfrak{gl}(4, R)$ are found. Each such semi-simple subalgebra acts by commutator on $\mathfrak{gl}(4, R)$. In each case the invariant subspaces are found and the results used to determine all possible subalgebras of $\mathfrak{gl}(4, R)$ that are not solvable. (Received August 17, 2016)