Ryad Ghanam* (raghanam@vcu.edu) and Gerard Thompson. *Minimal representations of Lie algebras with non-trivial Levi decomposition.*

We obtain minimal dimension matrix representations for each of the Lie algebras of dimensions five, six, seven and eight obtained by Turkowski that have a non-trivial Levi decomposition. We use the invariant subspaces associated to a particular representation of a semi-simple Lie algebra to help in the construction of the radical in the Levi decomposition. (Received July 26, 2017)