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Hernando Bermudez* (hbermud@emory.edu), 400 Dowman Drive, W401, Atlanta, GA 30322,
and **Skip Garibaldi** and **Victor Larsen**. *A Unified Solution to Some Linear Preserver
Problems.*

We obtain a general theorem that allows the determination of the group of linear transformations on a vector space V that preserve a polynomial function p on V for several interesting pairs (V, p) . The proof is based on methods from the theory of semisimple linear algebraic groups, in particular a theorem of Demazure on the automorphism group of some projective varieties. Along the way we make evident the connection between the transformations that preserve the polynomial and those that preserve a set of “minimal” elements of V , a connection that had previously been observed for numerous special cases. (Received September 12, 2011)