1096-14-2412 **Nathaniel F Bushek*** (`bushek@unc.edu`), 10 Mt Bolus Rd, Chapel Hill, NC 27514. *Hitchin's conjecture for simply-laced Lie algebras implies that for any simple Lie algebra.*

Let $\mathfrak{g}$ be any simple Lie algebra over $\mathbb{C}$. Recall there exists a princpal TDS embedding of $\mathfrak{sl}_2$ into $\mathfrak{g}$ passing through a principal nilpotent of $\mathfrak{g}$. $\wedge(\mathfrak{g}^*)^{\mathfrak{g}}$ is generated by primitive elements $\omega_1, \ldots, \omega_\ell$, where ℓ is the rank of $\mathfrak{g}$. N. Hitchin conjectured that for any primitive element $\omega \in \wedge^d(\mathfrak{g}^*)^{\mathfrak{g}}$, there exists an irreducible $\mathfrak{sl}_2$-submodule V_ω of dimension d such that ω is non-zero on $\wedge^d(V_\omega)$. The main motivation for Hitchin behind this conjecture lies in its connection with the study of polyvector fields on the moduli space $M_G(\Sigma)$ of semistable principal G-bundles on a smooth projective curve Σ of any genus $g > 2$. We prove that the validity of this conjecture for simple simply-laced Lie algebras implies its validity for any simple Lie algebra. Let G be a connected, simply-connected simple simply-laced algebraic group and K the fixed subgroup of a diagram automorphism of G. We show that the restriction map of representation rings, $R(G) \to R(K)$, is surjective. Our proof of the reduction of Hitchin's conjecture depends on this surjectivity. (Received September 18, 2013)