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Jonathan E Lopez* (lopez11@canisius.edu), 2001 Main Street, Buffalo, NY 14208. *The Lie Algebra Associated to the Filtration of $SL_n(R)$ by Congruence Subgroups.*

Let R be a commutative ring that is free of finite rank k as an abelian group, p a prime, and $SL_n(R)$ the special linear group. We show that the Lie algebra associated to the filtration of $SL_n(R)$ by p -congruence subgroups is isomorphic to the tensor product $\mathfrak{sl}_n(R \otimes_{\mathbb{Z}} \mathbb{Z}/p) \otimes_{\mathbb{F}_p} t\mathbb{F}_p[t]$, the Lie algebra of polynomials with zero constant term and coefficients $n \times n$ traceless matrices with entries polynomials in k variables over \mathbb{F}_p . (Received September 22, 2015)