1035-17-1083 **Nora C. Hopkins***, Department of Math & Comp. Sci., Indiana State University, Terre Haute, IN 47809. *Free split-null extensions of Lie triple systems.*

Suppose $(\mathcal{T}, [\ ,\ ,\ ])$ is a Lie triple system over a field k, char $k \neq 2, 3$. Given a vector space V over k along with mappings $\beta : \mathcal{T} \times V \times \mathcal{T} \to V$ and $f : V \times \mathcal{T} \times V \to V$, linear in each variable, we will call (V, β, f) a *split null extension of* $\mathcal{T}$ if $(M, [\ ,\ ,\ ])$ is a Lie triple system where $M = \mathcal{T} \oplus V$ $[\ ,\ ,\ ] : M \times M \times M \to M$ defined appropriately. If $f \equiv 0$ in the split null extension (V, β, f), it is a *bimodule* of $\mathcal{T}$. Let $\mathcal{C}_{\mathcal{T}}$ be the category of split null extensions of $\mathcal{T}$ and let $\mathcal{C}_{\mathcal{T}}^0$ be the full subcategory of bimodules with morphisms defined appropriately.

In this talk I will give two constructions of split null extensions for which $f \neq 0$ and show $(V, \beta, f) \xrightarrow{F} (V, \beta, 0)$ defines a functor from $\mathcal{C}_{\mathcal{T}}$ to $\mathcal{C}_{\mathcal{T}}^0$. Finally, I will construct the free split null extension (V_S, β_S, f_S) for any set S, thus preparing the way for doing cohomology in $\mathcal{C}_{\mathcal{T}}$. (Received September 18, 2007)