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Clifton E Ealy* (clifton.e.ealy@wmich.edu), Department of Mathematics, Western Michigan University, Kalamazoo, MI 49008-5152, and **Julia F Knight** and **Clifton F Ealy**. *On Computable Loops*. Preliminary report.

In this talk, we will study computable loops following M. Rabin's, Computable Algebra, General Theory and Theory of Computable Fields. We first consider the case, G is a finitely (recursively) generated computable group, and show that $\text{Inn}(G)$, $\text{Rmlt}(G)$ and $\text{Lmlt}(G)$ are computable groups. If F is a finitely generated free group, we show that $\text{Inn}(F)$, $\text{Rmlt}(F)$, $\text{Lmlt}(F)$, and $\text{Mult}(F)$ are computable. We give examples of computable loops. Finally, If L is a finitely generated free loop, we show that L , $\text{Rmlt}(L)$, and $\text{Lmlt}(L)$ are computable. (Received September 14, 2010)