1145-47-2788 **Ali Zarringhalam*** (ali.zaringhalam@gmail.com), 33 Academic Way, Math Dept UNH, Durham, NH 03824. *Invariant Operator Ranges in von Neumann Algebras.* Preliminary report.

Suppose $\mathcal{M}$ is a von Neumann algebra. An *operator range in* $\mathcal{M}$ is the range of an operator in $\mathcal{M}$. When $\mathcal{M} = B(H)$, the algebra of operators on a Hilbert space H, R. Douglas and C. Foiaş proved that if $S, T \in B(H)$, and T is not algebraic, and if S leaves invariant every T-invariant operator range, then $S = f(T)$ for some entire function f. I am investigating this result when $B(H)$ is replaced with a factor von Neumann algebra $\mathcal{M}$. (Received September 25, 2018)