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Gangyong Lee, S. Tariq Rizvi and Cosmin Roman* (cosmin@math.ohio-state.edu),
Department of Mathematics, Galvin Hall 4th, 4240 Campus Dr., Lima, OH 45804. *Indecomposable endoregular modules.*

It is well-known that a ring R is von Neumann regular iff for any $a \in R$, there exists $b \in R$ such that $a = aba$.

We recently studied and introduced the notion of an *endoregular module*, one endowed with the properties of both Rickart modules and dual Rickart modules. Let R be a ring. An R -module M is called endoregular if both the kernel and the image of any endomorphism of M are direct summands in M (M is a *Rickart module* if for all $\varphi \in \text{End}_R(M)$, $\text{Ker}\varphi \leq^\oplus M$, and dually, M is called a *dual Rickart module* if $\text{Im}\varphi \leq^\oplus M$ for all $\varphi \in \text{End}_R(M)$). We noted that a module whose endomorphism ring is von Neumann regular turns out to be precisely an endoregular module, thus confirming that the latter are module-theoretic generalizations of regular rings.

In this talk we will discuss properties of endoregular modules, with a view toward insights in the related properties of regular rings. In particular, we will present results and examples concerning direct decompositions as well as indecomposable endoregular modules.

(This is a joint work with S. Tariq Rizvi and Gangyong Lee.)

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