

1056-16-112

**Gangyong Lee\*** (lgy999@math.osu.edu), 231 W. 18th Ave, MA 332, Mathematics, OSU, Columbus, OH 43210, **S. Tariq Rizvi** (Rizvi.1@osu.edu), 4240 Campus Drive, Mathematics, Lima, OH 45804, and **Cosmin S Roman** (cosmin@math.osu.edu), 4240 Campus Drive, GA 420L, Mathematics, Lima, OH 45804. *Idempotents and Annihilators in Endomorphism Rings of Modules*. Preliminary report.

Let  $M$  be a right  $R$ -module and set  $S = \text{End}_R(M)$ .  $M$  is called a *Rickart module* if the right annihilator in  $M$  of any single element of  $S$  is generated by an idempotent in  $S$ , equivalently,  $\forall \varphi \in S, \text{Ker} \varphi \leq^\oplus M$ .

$M$  is called a *dual-Rickart module* (or *d-Rickart module*) if the image in  $M$  of every endomorphism of  $S$  is generated by an idempotent in  $S$ , equivalently,  $\forall \varphi \in S, \text{Im} \varphi \leq^\oplus M$ .

In this talk, we will discuss properties of these two concepts and explore connections between them. Various examples and results will be presented.

(This is a joint work with S. Tariq Rizvi and Cosmin Roman. It is a Preliminary Report.)

(Received July 28, 2009)