

Rings whose cyclic modules are Rad-lifting modules

Soumitra Das

Department of Mathematics, North-Eastern Hill University, Permanent Campus,
Shillong-793022, Meghalaya, India.

soumitrad330@gmail.com

Joint work with Ardeline M. Buhphang

A right R -module M is called *rad-lifting* if for every submodule N of M , with $Rad(M) \leq N$, there exists a module decomposition $M = M_1 \oplus M_2$ such that $M_1 \leq N$ and $N \cap M_2$ is small in M_2 . In this paper we study sufficient conditions for a direct summand, factor module of a rad-lifting module to be rad-lifting. Thereafter, we study rings over which every cyclic right R -module is rad-lifting. Examples are provided to illustrate the necessity and the sufficiency of the conditions in our result. We also provide examples to show that the class of rings all of whose cyclic right modules are rad-lifting is not left-right symmetric.