

Endocoherent complexes of modules

By XIAOXIANG ZHANG (Nanjing) and JIAMENG ZENG (Nanjing)

Abstract. Let R be an associative ring with identity. A complex C of R -modules is called *coherent* if it is finitely generated and every finitely generated subcomplex of C is finitely presented. Suppose that $C = (C_i, d_i)_{i \in \mathbb{Z}}$ is a complex of right R -modules and S is the endomorphism ring of C . There is a natural action of S on each term C_i so that $C = (C_i, d_i)_{i \in \mathbb{Z}}$ becomes a complex of left S -modules. It is proved that S is a left coherent ring if and only if every complex $P \in \text{pres } C$ has an add C -preenvelope. Moreover, if C is finitely presented, then it is coherent as a complex of left S -modules if and only if every finitely presented complex of right R -modules has an add C -preenvelope.

XIAOXIANG ZHANG &
JIAMENG ZENG
SCHOOL OF MATHEMATICS
SOUTHEAST UNIVERSITY
NANJING 211189
P. R. CHINA

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