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## *Some results on $G_C$ -flat dimension of modules*

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**Abstract:** In this paper, we study some properties of  $G_C$ -flat  $R$ -modules, where  $C$  is a semidualizing module over a commutative ring  $R$  and we investigate the relation between the  $G_C$ -yoke with the  $C$ -yoke of a module as well as the relation between the  $G_C$ -flat resolution and the flat resolution of a module over  $GF$ -closed rings. We also obtain a criterion for computing the  $G_C$ -flat dimension of modules.

**Keywords:**  $GF$ -closed ring;  $G_C$ -flat module;  $G_C$ -flat dimension; semidualizing module

**AMS Subject Classification:** 18G20, 18G25

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