Bavula, V.; Van Oystaeyen, F.

Summary: Let $K$ be an algebraically closed field of characteristic zero. Let $\Lambda$ be the ring of ($K$-linear) differential operators with coefficients from a regular commutative affine domain of Krull dimension 2 which is the tensor product of two regular commutative affine domains of Krull dimension 1. Simple holonomic $\Lambda$-modules are described. Let a $K$-algebra $D$ be a regular affine commutative domain of Krull dimension 1 and $D(D)$ be the ring of differential operators with coefficients from $D$. We classify (up to irreducible elements of a certain Euclidean domain) simple $D(D)$-modules (the field $K$ is not necessarily algebraically closed).

MSC:
16S32 Rings of differential operators (associative algebraic aspects)
16P60 Chain conditions on annihilators and summands: Goldie-type conditions
16D60 Simple and semisimple modules, primitive rings and ideals in associative algebras

Keywords:
rings of differential operators; Krull dimension; regular commutative affine domains; simple holonomic modules

Full Text: DOI

References:

© 2021 FIZ Karlsruhe GmbH


This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.