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# Triangular Matrix Representations of Rings of Generalized Power Series

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收稿日期 2003-3-21 修回日期 网络版发布日期 2006-7-15 接受日期 2003-10-10

**摘要** Let  $R$  be a ring and  $S$  a cancellative and torsion-free monoid and  $\leq$  a strict order on  $S$ . If either  $(S, \leq)$  satisfies the condition that  $0 \leq s$  for all  $s \in S$ , or  $R$  is reduced, then the ring  $[R^{\leq}]$  of the generalized power series with coefficients in  $R$  and exponents in  $S$  has the same triangulating dimension as  $R$ . Furthermore, if  $R$  is a PWP ring, then so is  $[R^{\leq}]$ .

**关键词** [Generalized triangular matrix representation](#) [Twisted generalized power series ring](#) [PWP ring](#) [Triangulating dimension](#)

分类号 [16W60](#)

## Triangular Matrix Representations of Rings of Generalized Power Series

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**Abstract** Let  $R$  be a ring and  $S$  a cancellative and torsion-free monoid and  $\leq$  a strict order on  $S$ . If either  $(S, \leq)$  satisfies the condition that  $0 \leq s$  for all  $s \in S$ , or  $R$  is reduced, then the ring  $[R^{\leq}]$  of the generalized power series with coefficients in  $R$  and exponents in  $S$  has the same triangulating dimension as  $R$ . Furthermore, if  $R$  is a PWP ring, then so is  $[R^{\leq}]$ .

**Key words** [Generalized triangular matrix representation](#) [Twisted generalized power series ring](#) [PWP ring](#) [Triangulating dimension](#)

DOI: 10.1007/s10114-005-0555-z

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