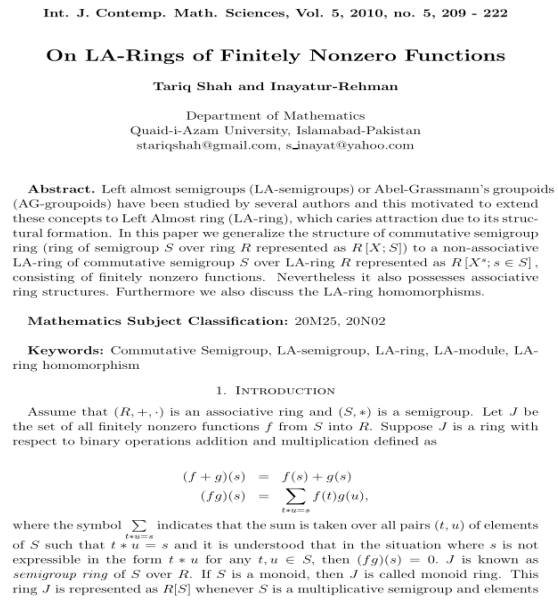
Rings And Semigroups



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On LA-Rings of Finitely Nonzero Functions

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Abstract. Left almost semigroups (LA-semigroups) or Abel-Grassmann's groupoids (AG-groupoids) have been studied by several authors and this motivated to extend these concepts to Left Almost ring (LA-ring), which caries attraction due to its structural formation. In this paper we generalize the structure of commutative semigroup ring (ring of semigroup S over ring R represented as $R[X;S]$) to a non-associative LA-ring of commutative semigroup S over LA-ring R represented as $R[X^*; s \in S]$, consisting of finitely nonzero functions. Nevertheless it also possesses associative ring structures. Furthermore we also discuss the LA-ring homomorphisms.

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Keywords: Commutative Semigroup, LA-semigroup, LA-ring, LA-module, LA-ring homomorphism

1. Introduction

Assume that $(R, +, \cdot)$ is an associative ring and $(S, *)$ is a semigroup. Let J be the set of all finitely nonzero functions f from S into R. Suppose J is a ring with respect to binary operations addition and multiplication defined as

$$\begin{aligned}(f+g)(s) &= f(s)+g(s)\\ (fg)(s) &= \sum_{t*u=s} f(t)g(u),\end{aligned}$$

where the symbol $\sum_{t*u=s}$ indicates that the sum is taken over all pairs (t, u) of elements of S such that $t * u = s$ and it is understood that in the situation where s is not expressible in the form $t * u$ for any $t, u \in S$, then $(fg)(s) = 0$. J is known as *semigroup ring* of S over R. If S is a monoid, then J is called monoid ring. This ring J is represented as $R[S]$ whenever S is a multiplicative semigroup and elements

A number of main properties of the commuting regular rings and commuting regular semigroups have been studied in this paper. Some significant results of.Losey, Gerald; Schneider, Hans. Group membership in rings and semigroups. Pacific J. Math. 11 (), no. 3, scenarioselling.com .This paper gives conditions that guarantee that a near-ring or a semi- group has maximal right, left, or two-sided ideals. Stronger results are.Introduction. What conditions guarantee that a near-ring or a semigroup have a maximal ideal (right, left, or two-sided)? This paper gives a wide variety of.ON A CERTAIN CLASSIFICATION OF RINGS. AND SEMIGROUPS. DOV TAMARI. In his paper Linear equations in non-commutative fields (Ann. of. Math. vol.Buy Rings and semigroups (Lecture notes in mathematics,) on scenarioselling.com ? FREE SHIPPING on qualified orders.From September 22nd to 26th, a conference on Arithmetic and Ideal Theory of Rings and Semigroups will be organized at the Institute of.Given any associative ring R, and any element x of R, we shall call c pseudo- of facts about pseudo-inverses in rings (or semigroups) not subjected to any.Clark scenarioselling.com semigroups over an arbitrary field. Proc. Glasgow Math. Assoc., 7 ( ), pp. 4. Clark scenarioselling.com semi-simple, finite-dimensional algebras.For modules over (ordinary) rings the notions of flatness and L-flatness coincide In this way, ?-rings are a common generalization of rings and semigroups.UNIQUE FACTORIZATION IN POWER. SERIES RINGS AND SEMIGROUPS. DON DBCKARD AND L. K. DURST. In this note a short proof is given for a theorem.Commutative Semigroup Rings was the first exposition of the basic properties of semigroup rings. Gilmer concentrates on the interplay between semigroups and.classification of rings in which the multiplicative semigroup is completely semi- also show that for completely semisimple multiplicative semigroups of rings, the.Commutative Monoid Rings with Finite Maximal or Prime Spectrum (R. Gilmer). The Group of Units of a Commutative Semigroup Ring of a Torsion-Free.