On the (n, m)- semirings derived polynomially from infinite semidomains

ADINA POP and MARIA S. POP

ABSTRACT.

In the paper [Marichal, J.-L. and Mathonet, P., *A description of n-ary semigroups polynomial-derived from integral domains*, Semigroup Forum, **83** (2011), No. 2, 241–249] the authors provide a complete classification of the n-semigroups, defined by polynomial functions over infinite commutative integral domains with identity (i.e., the n-semigroup structures polynomial derived from integral domains). We remark that some results from that paper can be extended for the n-semigroups polynomial-derived defined over infinite semidomains with zerosumfree element. Furthermore, in this note we give a description of (n, m)- semiring structures defined by polynomial functions over such semidomains.

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
NORTH UNIVERSITY OF BAIA MARE
VICTORIEI 76, 430122 BAIA MARE, ROMANIA
E-mail address: `adina_p_2006@yahoo.com`
E-mail address: `maria_sanziana@yahoo.com`