INTERNATIONAL SYMPOSIUM ON THE THEORY OF RINGS AND MODULES
07-08TH May 2003
Aligarh Muslim University
Aligarh, UP
India

ON SMARANDACHE RINGS AND THEIR PROPERTIES

W.B.Vasantha Kandasamy

The new notion and a very revolutionary type of mathematics has been developed in recent days and it is well-known as "*Smarandache Structures*". Smarandache algebraic structures were first introduced by Florentine Smarandache and Padilla Raul in the year 1998. Since then, nearly thirty thousand mathematicians around the world are actively pursuing research in this subject.

Generally, in any human field, a *Smarandache Structure* on a set A means a weak structure W on A such that there exists a proper subset B which is embedded with a stronger structure S. By proper subset one understands a set included in A, different from the empty set, from the unit element if any, and from A.

These types of structures occur in our everyday's life, that's why we study them. As a particular case, a Smarandache ring is a ring R

e-mail: vasantha@iitm.ac.in
web: http://mat.iitm.ac.in/~wbv

that contains a proper subset that is field with respect to the operations induced.

In this paper we define Smarandache rings, Smarandache units and Smarandache idempotents. We prove all Smarandache units are units and not conversely. These definitions forces to define Smarandache domains. We see Smarandache domains can have zero divisors but should not have only Smarandache zero divisors. Several interesting results are obtained. For complete literature about Smarandache rings, an interested researcher is requested to refer to *Smarandache Rings* (W. B. Vasantha Kandasamy, American Research Press, 2002).

e-mail: vasantha@iitm.ac.in
web: http://mat.iitm.ac.in/~wbv