

ON STRONGLY PRIME NEAR-RINGS OF CONTINUOUS FUNCTIONS

G. L. BOOTH NELSON MANDELA METROPOLITAN UNIVERSITY, SOUTH AFRICA

A right near-ring *N* is called strongly prime if for each $0 \neq x \in N$ there exists a finite subset *F* (called an insulator of *N*) such that aFx = 0 implies x = 0 for all $x \in N$. In this talk we will consider when the near-ring $N_0(G)$ of zero-preserving continuous self-maps of a topological group *G* and its factor rings are strongly prime. We will investigate the strongly prime radical of $N_0(G)$. This is completely described when $G = \mathbb{R}$, but substantial difficulties are encountered with more general topological groups, even in the case $G = \mathbb{R}^n$, where n > 1. Some of the above results will also be extended to sandwich near-rings of continuous functions.