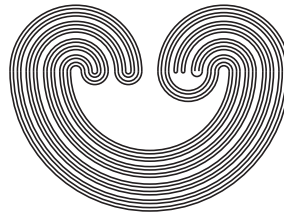


<http://topology.auburn.edu/tp/>

TOPOLOGY PROCEEDINGS



Volume 55, 2020

Pages 77–85

<http://topology.nipissingu.ca/tp/>

ON SOME QUESTIONS OF SACK AND WATSON

by

MEHDI PARSINIA

Electronically published on May 8, 2019

This file contains only the first page of the paper. The full version of the paper is available to Topology Proceedings subscribers. See <http://topology.auburn.edu/tp/subscriptioninfo.html> for information.

Topology Proceedings

Web: <http://topology.auburn.edu/tp/>

Mail: Topology Proceedings
Department of Mathematics & Statistics
Auburn University, Alabama 36849, USA

E-mail: topolog@auburn.edu

ISSN: (Online) 2331-1290, (Print) 0146-4124

COPYRIGHT © by Topology Proceedings. All rights reserved.

ON SOME QUESTIONS OF SACK AND WATSON

MEHDI PARSINIA

ABSTRACT. In this paper, we investigate answers to the two questions raised in [J. Sack and S. Watson, Characterizations of ideals in intermediate C -rings $A(X)$ via A -compactifications of X , *Internat. J. Math. Math. Sci.*, Volume 2013, 1-6] and the problem raised in [J. Sack and S. Watson, Characterizing $C(X)$ among intermediate C -rings on X , *Topology Proc.*, **45** (2015), 301-313].

1. INTRODUCTION

Throughout this article all topological spaces are assumed to be Tychonoff. For a given topological space X , $C(X)$ denotes the algebra of all real-valued continuous functions on X and $C^*(X)$ denotes the subalgebra of $C(X)$ consisting of all bounded elements. A subring $A(X)$ of $C(X)$ is called an intermediate ring, if $C^*(X) \subseteq A(X)$. It is proved in [3, Proposition 2.1] that intermediate subrings are precisely absolutely convex subrings of $C(X)$ where by an absolutely convex subring of $C(X)$ we mean a subring R for which if $f \in R$, $g \in C(X)$ and $|g| \leq |f|$, then $g \in R$. A subring of $C(X)$ which is isomorphic with $C(Y)$ for some Tychonoff space Y is called a C -ring. An intermediate C -ring is a C -ring which is also an intermediate ring; for details about intermediate C -rings see [11]. The reader is referred to [8] and [2] for undefined terms and notations concerning $C(X)$ and intermediate rings, respectively. In this article,

2010 *Mathematics Subject Classification.* 54C30, 46E25.

Key words and phrases. Intermediate ring, z -ultrafilter, maximal ideal.

©2019 Topology Proceedings.

This file contains only the first page of the paper. The full version of the paper is available to Topology Proceedings subscribers. See <http://topology.auburn.edu/tp/subscriptioninfo.html> for information.