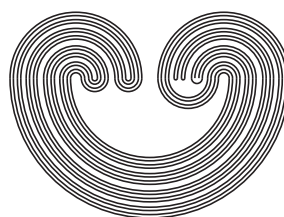


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TOPOLOGY PROCEEDINGS



Volume 51, 2018

Pages 61-75

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

CAUCHY sn -SYMMETRIC SPACES
WITH A cs -NETWORK (cs^* -NETWORK)
HAVING PROPERTY σ -(P)

by

TRAN VAN AN AND LUONG QUOC TUYEN

Electronically published on July 5, 2017

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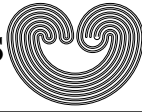
Web: <http://topology.auburn.edu/tp/>

Mail: Topology Proceedings
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E-mail: topolog@auburn.edu

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

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**CAUCHY sn -SYMMETRIC SPACES
WITH A cs -NETWORK (cs^* -NETWORK)
HAVING PROPERTY σ -(P)**

TRAN VAN AN AND LUONG QUOC TUYEN

ABSTRACT. In this paper, we introduce the concept of Cauchy sn -symmetric spaces, consider properties of Cauchy sn -symmetric spaces with cs -networks (cs^* -networks) having certain σ -(P) properties, and give some characterizations of images of metric spaces under certain sequence-covering π -maps. Then, we give affirmative answers to the problems posed by Y. Tanaka and Y. Ge in [18], and give some partial answers to the problems posed by Y. Ikeda, C. Liu and Y. Tanaka in [6].

1. INTRODUCTION AND PRELIMINARIES

In 2002, Y. Ikeda, C. Liu and Y. Tanaka introduced the notion of σ -strong networks as a generalization of “development” in developable spaces, and consider certain quotient images of metric spaces in terms of σ -strong networks. By means of σ -strong networks, some characterizations for the quotient compact images of metric spaces are obtained (see in [6], [18], for example). It is known that if X is a quotient compact image of a metric space, then X is a symmetric space having a σ -point-finite cs^* -network, see in [6]. Then, the following question was posed by Y. Ikeda, C. Liu and Y. Tanaka.

2010 *Mathematics Subject Classification.* Primary 54C10, 54D55, 54E40; Secondary 54E99.

Key words and phrases. cs -network; cs^* -network; Cauchy sn -symmetric space; σ -(P)-strong network; property σ -(P); α (P)-map.

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