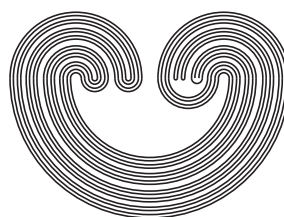


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by

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NORMALITY IN PRODUCTS OF RUDIN'S DOWKER SPACES WHICH ARE CONSTRUCTED FROM SUSLIN TREES

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ABSTRACT. If κ is the successor of an uncountable regular cardinal, N a finite integer and $\{R^i\}_{i \in N}$ is a finite sequence of κ -Suslin trees such that $\prod_{i \in N} R^i$ has the κ -c.c., then $\prod_{i \in N} X^i$ is normal when X^i is a Rudin's Dowker space that is constructed from R^i . Moreover, $\prod_{i \in N} X^i$ is again Dowker by the same assumption.

1. INTRODUCTION

It is known that the product of normal spaces may not be normal. The normality of the product of normal spaces has been deeply studied. This investigation produced some significant results such as Morita's duality conjectures, which are proved by K. Chiba, T. Przymusiński, and M. E. Rudin [2] and Z. T. Balogh [1]. On the other hand, various normal spaces whose products with certain kinds of normal spaces are not normal were constructed. These results contain famous counterexamples in topology such as the Sorgenfrey's line.

A *Dowker space* is a normal space that is not countably paracompact. This definition came from *Dowker's problem* given by C. H. Dowker in 1951: 'Every normal space is countably paracompact'. The problem is understood as one of the studies on the product of normal spaces by the following theorem which is known as Dowker's characterization theorem.

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