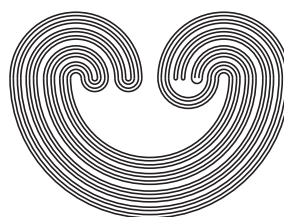


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## LOCALIZATION OF ANTISYMMETRIC SPACES IN THE FRAMEWORK OF QUASI-METRICS

by

FİLİZ YILDIZ

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Department of Mathematics & Statistics  
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## LOCALIZATION OF ANTISYMMETRIC SPACES IN THE FRAMEWORK OF QUASI-METRICS

FİLİZ YILDIZ

**ABSTRACT.** Antisymmetric  $T_0$ -quasi-metric spaces which are in some sense opposite to metric spaces had appeared in the previous studies rather naturally, within the framework of asymmetry of the  $T_0$ -quasi-metric spaces.

In this paper, the locality status of antisymmetric  $T_0$ -quasi-metrics is described and studied under the name local antisymmetricty. Following that we examine the cases under which conditions a non-metric  $T_0$ -quasi-metric space would become locally antisymmetric as well as all finite  $T_0$ -quasi-metric spaces are locally antisymmetric. Moreover, some asymmetric properties of locally antisymmetric  $T_0$ -quasi-metric spaces are determined via topological perspectives and metrics. As another approach in the context of asymmetric topology, some different aspects of the local antisymmetricty are discussed especially for the  $T_0$ -quasi-metrics generated by the asymmetric norms.

### 1. INTRODUCTION

In [12], the notion of antisymmetric  $T_0$ -quasi-metric space which is in some sense opposite to metric space had appeared rather naturally, within the framework of asymmetry of the  $T_0$ -quasi-metric spaces. Some crucial asymmetric properties and the topological aspects of antisymmetric  $T_0$ -quasi-metric spaces had been investigated in [5], by presenting many results and (counter) examples.

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*Key words and phrases.*  $T_0$ -quasi-metric; symmetric path; connected graph; asymmetric norm; local antisymmetric connectedness.

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