

# CANONICAL ALMOST GEODESIC MAPPINGS OF THE FIRST TYPE OF SPACES WITH AFFINE CONNECTION ONTO GENERALIZED 2-RICCI-SYMMETRIC SPACES

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**Abstract.** In the paper we consider almost geodesic mappings of the first type of spaces with affine connections onto generalized 2-Ricci-symmetric spaces. The main equations for the mappings are obtained as a closed system of linear differential equations of Cauchy type in the covariant derivatives. The obtained result extends an amount of research produced by Sinyukov, Berezovski and Mikeš.

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## 1. Introduction

In the sixties of the 20th century has Sinyukov considered almost geodesic mappings of Riemannian and affinely connected spaces. The main results were presented in a research [12].

Theory goes back in 19th century by Levi-Civita, in which the problem on the search for Riemannian spaces with common geodesics was stated and solved in a special coordinate system. We note a remarkable fact that this problem is related to the study of equations of dynamics of mechanical systems.