

# MANNHEIM CURVES AND THEIR PARTNER CURVES WITH MODIFIED ORTHOGONAL FRAME IN MINKOWSKI SPACE E 3 1

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## Abstract

In this paper, we study Mannheim curves and Mannheim pairs by using the modified orthogonal frame in Minkowski 3-space E31. We give some characterizations of Mannheim Curves and their partner Curves in E31.

## Hosted file

Mannheim curves -final.pdf available at <https://authorea.com/users/347554/articles/473201-mannheim-curves-and-their-partner-curves-with-modified-orthogonal-frame-in-minkowski-space-e-3-1>