UDC 514.76

THE AFFINE CONNECTION IN THE NORMAL COORDINATES

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We propose a method to calculate the derivatives of the Christoffel symbols in the normal coordinates on a smooth manifold with symmetric affine connection. As an application, we construct an algorithm for computing the Taylor series of the double exponential map.

Key words and phrases: affine connection, normal coordinates, composition of exponential maps.

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Translated into English:

Siberian Advances in Mathematics, V. 23, N 1, 1–19 (2013). DOI: 10.3103/S105513441301001X

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