

## POLAR TRANSFORM OF CONFORMALLY FLAT METRICS

*E. D. Rodionov and V. V. Slavskii*

In the theory of convex subsets in a Euclidean space, an important role is played by Minkowski duality (the polar transform of a convex set, or the Legendre transform of a convex set). We consider conformally flat Riemannian metrics on the  $n$ -dimensional unit sphere and their embeddings into the isotropic cone of the Lorentz space. For a given class of metrics, we define and carry out a detailed study of the Legendre transform.

*Key words and phrases:* Lobachevskii geometry, convex set, conformally flat metric.

*Rodionov Evgenij Dmitrievich*

Altai State University,  
Barnaul, 656049 Russia.  
E-mail: edr2002@mail.ru

Received

October 1, 2016

*Slavskij Viktor Vladimirovich*

Yugra State University,  
Khanty-Mansiysk, 628012 Russia.  
E-mail: slavsky2004@mail.ru

Translated into English:

*Siberian Advances in Mathematics*, V. 28, N 2, 101–114 (2018).

DOI: 10.3103/S1055134418020025