

**ON THE GENERALIZED TRIANGLE INEQUALITY  
FOR QUASIMETRICS INDUCED BY  
NONCOMMUTING VECTOR FIELDS***A. V. Greshnov*

For a sufficiently wide class of  $r$ -smooth basis vector fields, we obtain necessary and sufficient conditions for some anisotropic metric functions induced by these vector fields to be quasimetrics. These results are applied to the problem of the existence of a nilpotent tangent cone at a distinguished point.

*Key words and phrases:* canonical coordinates, generalized triangle inequality, nilpotent tangent cone, nilpotent group and algebra, vector field, quasimetric.

*Greshnov Aleksandr Valer'evich*

Sobolev Institute of Mathematics,  
Novosibirsk, 630090 Russia.  
Novosibirsk State University,  
Novosibirsk, 630090 Russia.  
E-mail: greshnov@math.nsc.ru

Received

April 23, 2009

Translated into English:

*Siberian Advances in Mathematics*, V. 22, N 2, 95–114 (2012).