

*ISAAC Conference, 23-27 April, 2007, Tbilisi, Georgia*  
*Dedicated to the Centenary of I. Vekua*

**ON THE EXISTENCE AND NONEXISTENCE OF GLOBAL  
SOLUTIONS OF THE CHARACTERISTIC CAUCHY AND  
DARBOUX PROBLEMS FOR THE MULTIDIMENSIONAL  
NONLINEAR WAVE EQUATIONS**

***Kharibegashvili S.***

A. Razmadze Mathematical Institute

For the multidimensional nonlinear wave equations the characteristic Cauchy and Darboux problems has been considered in the conical domains. Depending on the exponent of nonlinearity and on the space dimension of the equation, the problem of the existence and nonexistence of global solutions of the characteristic Cauchy or Darboux problem is investigated. The question on the local solvability of these problems is also considered.