Solution of Volterra partial integral equations with the use of differential equations

Zhegalov V.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

We consider Volterra partial differential equations with two and three independent variables and reduce them to Goursat problems, whose solutions are constructed by the Riemann method. We single out cases in which the corresponding Riemann functions (and hence the solutions of the original equations) can be written out in closed form. © 2008 MAIK Nauka.