General Solutions for Modified Eikonal Equations

Iryna Yehorchenko

Instytut Matematyczny PAN

Abstract. We find implicit general solutions for modified eikonal equations

$$u_a u_a = F(u_t),$$

where lower indices at dependent variables designate derivatives, $a = 1, 2, .., n$, and summation is implied over the repeated indices. We will consider general solutions and symmetries of these equations, and relations of these equations to reduction procedures of higher-order PDE.