AN OPERATORIAL APPROACH TO SOLUTIONS OF BOUNDARY VALUE PROBLEMS IN THE HALF-PLANE

C. Cassisa, P.E. Ricci

Department of Mathematics
of the University of Rome "La Sapienza"

I. Tavkhelidze

I.Vekua Institute of Applied Mathematics
of I. Javakhishvili Tbilisi State university

A unified approach to solutions of boundary value problem in the half-plane is obtained by using the Hermite-Kampé de Fériet (or Gould-Hopper) polynomials in two variables. Many generalizations of classical canonical problems of hyperbolic and elliptic type are treated by using the pseudo-hyperbolic or pseudo-circular functions of the derivative operator.