

Prof. Semyon Yakubovich
University of Porto, Portugal

Title: The half-Hilbert and half-Hartley transforms: inversion, convolution and Titchmarsh's theorems with applications to integral equations.

Abstract: We establish Plancherel type theorems in L_2 related to the Hilbert and Hankel transforms over the nonnegative half-axis. Moreover, involving the convolution method, developed by the author in 1990 and which is based on the double Mellin-Barnes integrals, the corresponding convolution and Titchmarsh's theorems are proved. As an application, we consider solvability conditions for a class of integral and integro-functional equations of the second kind.