Within functional analysis and its subsequent applications to differential equations, a frequent and important problem is finding the dual to a given function space. In the setting of rearrangement-invariant spaces, the role of the dual space is, in a sense, played by the associated space. The norm in the associated space to an r.i. space X can be described by studying the embedding of X into a weighted Lorentz space Lambda .

In the talk I will present new results concerning characterizations of embeddings of weighted Lambda-spaces into so-called Copson-Lorentz spaces. The norm in the latter involves an iterated Hardy operator which makes the whole question more difficult as it is needed to work with functional inequalities containing a "complicated" expression on the right-hand side. I will show how to deal with this problem by employing a suitable discretization technique. The results cover the full range of positive exponents with minimal restrictions on the weights. As a corollary, a characterization of the associate norm of the Copson-Lorentz space will be given for all possible cases of the involved exponents.