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SOO-JONG REY

**Citation for the award of the 2001 ICTP Prize
in honour of Hans Bethe in the field of
High Energy Physics**

The 2001 ICTP Prize in honour of Hans Bethe in the field of High Energy Physics is awarded to Soo-Jong Rey.

Soo-Jong Rey is a theoretical physicist working at the Centre for Theoretical Physics of the Seoul National University in Korea. He is the author of about ninety publications in the fields of String Theory, Cosmology and Particle Physics.

Among his many contributions to the above fields, one should mention those in the early '90's devoted to the study of non-perturbative aspects of String Theory, such as the occurrence of domain walls and instantons in the superstring low energy effective actions. A paper he published in 1991, where string instanton solutions in the four dimensional heterotic string were discovered, is one of the first examples of such investigations. This line of research played a crucial role in developing the subsequent understanding of non-perturbative dynamics of string theory, culminating with the discovery of various dualities in String Theory in the mid '90's.

In the last few years he has contributed with well-known papers to the matrix theory formulation of the heterotic string, and various aspects of the duality between string theory and (large N) gauge theories, discovered by J. Maldacena. In particular, in an important paper written in collaboration with J. Yee in 1998, the problem of describing static quark sources, as well as the computation of the quark-anti-quark potential and other gauge theory observables, was discussed in the framework of the dual Superstring Theory.