

# Trautman-Bondi Energy and its Universality

**Jerzy Kijowski**

Center for Theoretical Physics, Polish Academy of Sciences, Poland

E-mail: [kijowski@cft.edu.pl](mailto:kijowski@cft.edu.pl)

## ABSTRACT

In his PhD thesis (1958) Andrzej Trautman has shown how to calculate amount of energy carried by gravitational waves. This approach was later simplified by Roger Penroses definition of null infinity. In my talk I show that these phenomena are universal and occur not only in General Relativity but also in any special-relativistic field theory (e.g. in linear or nonlinear electrodynamics). For this purpose I use a novel description of the Scri, which leads to a further simplification of the theory which can be called “the Hamiltonian Theory of Radiation”.