

Radio Wave Propagation Algorithms Based on the Reciprocity Principle

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The reciprocity principle is best known as a result concerning the interchangeability of antennas. In its general form, however, it can be used to derive a large number of integral results that include the better known integral equations of electromagnetism. Furthermore, numerous extensions form the basis of some quite general approaches to problems in radio wave propagation. The current paper describes some recent developments in this area and discusses the extension of these ideas to non isotropic propagation media through the concept of pseudo-reciprocity.