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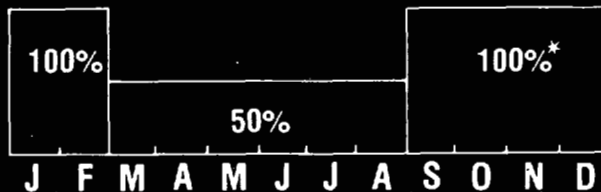
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A GUIDE TO DUES AND FEES

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Membership Application



23-2

ANTENNAS AND PROPAGATION SOCIETY

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Announcement of Special Issue on Inverse Methods in Electromagnetics

CALL FOR PAPERS

PAPERS are solicited for a special issue of this TRANSACTIONS to be devoted to inverse methods in electromagnetics. This special issue is intended to provide the background and recent advances in inverse methods that are used for the study of the radiation, propagation, and diffraction of electromagnetic waves. Papers describing recent theoretical, computational and experimental applications of inverse methods and correlations with established theories are invited. Suggested topics include novel aspects of inversion procedures applied to remote sensing, probing, imaging, target identification, scattering, and pattern synthesis. Also suggested are inversion techniques for aperture-limited and sparse data problems, and considerations of restrictedness, exactness, self-consistency, and uniqueness.

BACKGROUND

During the past decade considerable progress has been made in developing inverse methods useful in many physical sciences. The purpose of this special issue is to highlight the contributions made towards the electromagnetic sciences for which inverse methods have become of increasing importance. Thus a special issue is timely and appropriate for IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION.

The basic concept common to inverse methods in electromagnetics is that observed electromagnetic fields are used to obtain information about the scattering objects, or field sources, or propagating medium. This procedure is the *inverse* of the usual *direct* methods of analysis in which the target of sources are assumed *a priori* and the scattered fields are then determined. As with direct methods, there are various inverse methods for studying electromagnetic phenomena: exact, formal methods are mathematically exact and complete, but have only restricted applications.

Approximate methods use various physical and mathematical approximations to treat various problems. High-frequency approximations, data-processing methods, and optimization techniques are some approximate inverse methods.

Guest Editor: Dr. W. M. Boerner, Associate Guest Editor: Dr. A. K. Jordon

INSTRUCTIONS FOR AUTHORS

A one-page abstract of the proposed paper including the address and affiliation of the author(s) should be sent to the Guest Editor by October 15, 1979. The papers for this Special Issue will be selected from these abstracts and prospective authors will be notified by December 1, 1979. A complete manuscript of 15-20 pages including figures should be sent to the Guest Editor by April 15, 1980. Publication of this Special Issue is scheduled for the Spring of 1981. The address of the Guest Editor is

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