

CONTENTS

<i>Contributors</i>	<i>vii</i>
<i>Preface</i>	<i>ix</i>
An introduction to some mathematical techniques for nonlinear problems <i>Piergiorgio L. E. Uslenghi</i>	1
The birth of a paradigm <i>Alwyn C. Scott</i>	35
A physical description of the spectral transform <i>David W. McLaughlin</i>	65
Solitons in randomly inhomogeneous media <i>Ioannis M. Besieris</i>	87
Quasiparticle view of beam propagation in nonlinear media <i>Nathan Marcuvitz</i>	117
The nonstationary evolution of localized wave fields in nonlinear dispersive media <i>A. B. Shvartsburg</i>	133
The nonlinear resonant plasma wave interaction in a collisional magnetoplasma <i>A. B. Shvartsburg</i>	189
Lagrangian methods in nonlinear plasma wave interaction <i>F. W. Crawford</i>	239
Electromagnetic problems in composite materials in linear and nonlinear regimes <i>George C. Papanicolaou</i>	253
Stationary regimes in passive nonlinear networks <i>A. G. Ramm</i>	263

Nonlinearly loaded antennas <i>Giorgio Franceschetti and Innocenzo Pinto</i>	303
Nonlinear oscillations (limit cycles) in physical and biological systems <i>F. Kaiser</i>	343
Nonlinear interactions of electromagnetic waves with biological materials <i>Frank S. Barnes and Chia-lun J. Hu</i>	391