

Contents

| | |
|---|-----|
| Preface | vii |
| Diffusion in cellular microdomains: Application to synapses D. HOLCMAN | 1 |
| Modeling and computation of the scattering by a nano optical medium G. BAO AND Y. SUN | 27 |
| Behaviour of periodic fast multipole boundary integral equation method for Maxwell's equations near Wood's anomalies Y. OTANI AND N. NISHIMURA | 43 |
| An asymptotic factorization method for inverse electromagnetic scattering in layered media II: A numerical study R. GRIESMAIER AND M. HANKE | 61 |
| Faults in elastic half space: Direct and inverse problem D. VOLKOV | 81 |
| Asymptotics in the presence of inclusions of small volume for a conduction equation: A case with a non-smooth reference potential E. BONNETIER AND F. TRIKI | 95 |
| Inverse Born series for diffuse waves K. KILGORE, S. MOSKOW, AND J. C. SCHOTLAND | 113 |
| On identification of doping profile in semiconductors V. ISAKOV | 123 |
| Reconstruction algorithm for the linearized polarization tomography problem with incomplete data W. LIONHEART AND V. SHARAFUTDINOV | 137 |
| An effectivization of the global reconstruction in the Gel'fand-Calderón inverse problem in three dimensions R. G. NOVIKOV | 161 |
| The image system and Green's function for the ellipsoid G. DASSIOS AND J. C.-E. STEN | 185 |