

CONTENTS

<i>Foreword</i>	v
<i>Preface</i>	vii
<i>Contributors</i>	xi
<i>Part I: Analysis</i>	
Landau-zener phenomenon on a double of weakly Interacting quasi-2d lattices N. BAGRAEV, G. MARTIN AND B. PAVLOV	1
Resonant scattering by open periodic waveguides S.P. SHIPMAN	7
Mathematical and numerical techniques for open periodic waveguides J. TAUSCH	51
<i>Part II: Numerical Techniques</i>	
Computational methods for multiple scattering at high frequency with applica- tions to periodic structure calculations X. ANTOINE, C. GEUZAIN AND K. RAMDANI	75
Exact boundary conditions for wave propagation problems in periodic media including a local perturbation S. FLISS, P. JOLY AND J.-R. LI	111
Fast numerical methods for waves in periodic media M. EHRHARDT AND C. ZHENG	141
<i>Part III: Practical Applications</i>	
Negative refraction based applications in artificial periodic media O. VANBÉSIEN	173
Modeling of metamaterials in wave propagation G. LEUGERING, E. ROHAN AND F. SEIFRT	203