
Contents

Acknowledgment	vii
Chapter 1. Introduction	1
Chapter 2. Transfer Matrix and Lyapounov Exponent	11
Chapter 3. Herman's Subharmonicity Method	15
Chapter 4. Estimates on Subharmonic Functions	19
Chapter 5. LDT for Shift Model	25
Chapter 6. Avalanche Principle in $SL_2(\mathbb{R})$	29
Chapter 7. Consequences for Lyapounov Exponent, IDS, and Green's Function	31
Chapter 8. Refinements	39
Chapter 9. Some Facts about Semialgebraic Sets	49
Chapter 10. Localization	55
Chapter 11. Generalization to Certain Long-Range Models	65
Chapter 12. Lyapounov Exponent and Spectrum	75
Chapter 13. Point Spectrum in Multifrequency Models at Small Disorder	87
Chapter 14. A Matrix-Valued Cartan-Type Theorem	97
Chapter 15. Application to Jacobi Matrices Associated with Skew Shifts	105
Chapter 16. Application to the Kicked Rotor Problem	117
Chapter 17. Quasi-Periodic Localization on the \mathbb{Z}^d -lattice ($d > 1$)	123
Chapter 18. An Approach to Melnikov's Theorem on Persistency of Non-resonant Lower Dimension Tori	133

Chapter 19. Application to the Construction of Quasi-Periodic Solutions of Nonlinear Schrödinger Equations	143
Chapter 20. Construction of Quasi-Periodic Solutions of Nonlinear Wave Equations	159
Appendix	169