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Sommario/riassunto	Advances in One-Dimensional Wave Mechanics provides a comprehensive description of the motion of microscopic particles in one-dimensional, arbitrary-shaped potentials based on the analogy between Quantum Mechanics and Electromagnetism. Utilizing a deeper understanding of the wave nature of matter, this book introduces the concept of the scattered sub-waves and a series of new analytical results using the Analytical Transfer Matrix (ATM) method. This work will be useful for graduate students majoring in physics, mainly in basic quantum theory, as well as for academic researchers exploring electromagnetism, particle physics, and wave mechanics and for

experts in the field of optical waveguide and integrated optics. Prof. Zhuangqi Cao is a Professor of Physics at Shanghai Jiao Tong University, China. Dr. Cheng Yin is a teacher at Jiangsu Key Laboratory of Power Transmission and Distribution Equipment Technology, Hohai University, China.