The book presents a detailed and comprehensive theoretical treatment of interactions of narrow optical beams with abrupt planar discontinuities of dielectric media. While the focus is on the problem of beams at a single linear dielectric interface, examples of nonlinear interfaces and stratified media are also discussed. The method of analysis relies mainly on the notion of first-order and second-order effects of beam nonspecular reflection and transmission, beam reflection, transmission and scattering matrices and cross-polarization coupling of beam field components. The content of this book follows closely author's recent publications in this field. The contribution of other authors to this topic is commented as well in each successive section of this book.