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Autore	Bonilla L. L (Luis Lopez), <1956->
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Sommario/riassunto

The present book introduces and develops mathematical techniques for the treatment of nonlinear waves and singular perturbation methods at a level that is suitable for graduate students, researchers and faculty throughout the natural sciences and engineering. The practice of implementing these techniques and their value are largely realized by showing their application to problems of nonlinear wave phenomena in electronic transport in solid state materials, especially bulk semiconductors and semiconductor superlattices. The authors are recognized leaders in this field, with more than 30 combin