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Sommario/riassunto	This book highlights the systematic investigation into the calculation of Hansen coefficients and their derivatives in satellite orbital dynamics. Direct, recurrence and other types of calculation methods of Hansen coefficients and their derivatives are comprehensively presented. The calculation in motion theory without singularities is particularly discussed. From the perspective of accuracy and efficiency, the advantages and disadvantages of various calculation methods are compared and analyzed, and some improvements are proposed. This book is intended for graduate students and researchers engaged in astronomy, space science, and geodesy. One can choose from the

calculation methods of Hansen coefficients and their derivatives
presented in this book to meet their practical needs.
