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Nota di contenuto	Preface -- 1 Introduction -- Part I Thin-walled Beams of Rectangular Cross Section -- 2 Higher-Order Beam Theory for Straight Box Beams -- 3 Joint Matching Matrix Approach -- 4 Multiply-Connected Box Beam Systems under Out-of-Plane Loads -- 5 Multiply-Connected Box Beam Systems under In-Plane Loads -- Part II Analysis of Arbitrarily Sectioned Beams -- 6 Straight Beams of Arbitrarily Shaped Sections -- 7 Arbitrarily Sectioned Beams of Varying Profiles -- 8 Analysis for Arbitrarily-Connected Beam Joints and Beam-Panel Structures -- Appendix -- References -- Index.
Sommario/riassunto	This book presents a comprehensive introduction to an advanced beam theory applicable to thin-walled beams of rectangular and arbitrarily-shaped cross-sections. Furthermore, it describes a unique beam-based approach to handling joint structures consisting of thin-walled beams, compiled here for the first time. This higher-order beam theory (HoBT), developed by the authors over the past two decades, uses more than six degrees of freedom (DOFs) in contrast to the classical theories, which use only six DOFs. The additional degrees of freedom describe sectional deformations such as warping and distortion. This book presents a novel systematic procedure to derive the sectional deformations analytically for rectangular cross-sections and numerically for arbitrarily-shaped cross-sections. This book is a must

for structural/mechanical engineers who wish to understand and design structures involving thin-walled beams.