Book description

The present work presents some of the central topics in differential geometry in a simple and concise fashion. It covers an amazing amount of material on submersions and submanifolds in an almost Hermitian manifold. The notion of Riemannian immersions has been intensively studied since the very beginning of Riemannian geometry. The dual notion of Riemannian submersions was initiated recently but the idea of horizontally conformal semi-Riemannian submersions covered in this work is more general than the idea of semi-Riemannian submersions. The theory of submanifolds has been proved to be a very interesting topic in modern differential geometry. Topics included here are: indefinite totally real submanifolds of an indefinite complex space form, maximal spacelike submanifolds, sectional and Ricci curvatures of horizontally conformal semi-Riemannian submersions and horizontally conformal submersions from a complex space form to a Riemannian manifold. All topics are presented in a surprisingly elegant and efficient manner with interesting results in each chapter. This work is suitable for post-graduate students and researchers in the field of differential geometry.