



Differential Geometry: Connections, Curvature, and Characteristic Classes (Hardback)

By Loring W. Tu

Springer International Publishing AG, Switzerland, 2017. Hardback. Condition: New. 1st ed. 2017. Language: English . Brand New Book. This text presents a graduate-level introduction to differential geometry for mathematics and physics students. The exposition follows the historical development of the concepts of connection and curvature with the goal of explaining the Chern-Weil theory of characteristic classes on a principal bundle. Along the way we encounter some of the high points in the history of differential geometry, for example, Gauss Theorema Egregium and the Gauss-Bonnet theorem. Exercises throughout the book test the reader's understanding of the material and sometimes illustrate extensions of the theory. Initially, the prerequisites for the reader include a passing familiarity with manifolds. After the first chapter, it becomes necessary to understand and manipulate differential forms. A knowledge of de Rham cohomology is required for the last third of the text. Prerequisite material is contained in author's text An Introduction to Manifolds, and can be learned in one semester. For the benefit of the reader and to establish common notations, Appendix A recalls the basics of manifold theory. Additionally, in an attempt to make the exposition more self-contained, sections on algebraic constructions such as the tensor product...



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Reviews

This publication is amazing. It is definitely basic but shocks in the fifty percent of your publication. You won't feel monotony at anytime of your own time (that's what catalogues are for concerning if you question me).

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This kind of book is every little thing and taught me to look ahead of time and a lot more. I am quite late in starting reading this one, but better than never. I found out this book from my dad and he encouraged this pdf to find out.

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