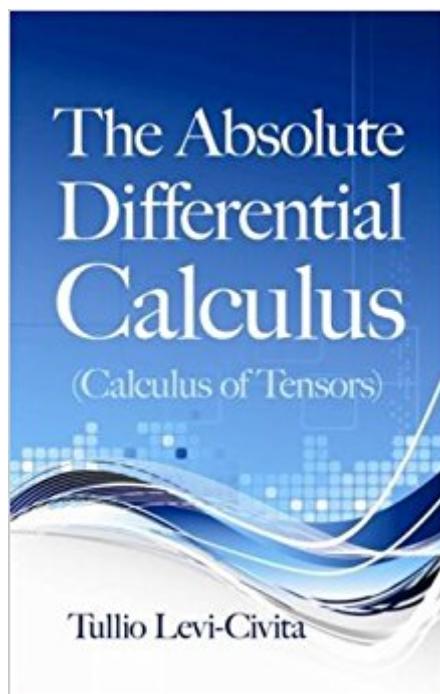


The book was found

# The Absolute Differential Calculus (Calculus Of Tensors) (Dover Books On Mathematics)



## Synopsis

Written by a towering figure of twentieth-century mathematics, this classic examines the mathematical background necessary for a grasp of relativity theory. Tullio Levi-Civita provides a thorough treatment of the introductory theories that form the basis for discussions of fundamental quadratic forms and absolute differential calculus, and he further explores physical applications. Part one opens with considerations of functional determinants and matrices, advancing to systems of total differential equations, linear partial differential equations, algebraic foundations, and a geometrical introduction to theory. The second part addresses covariant differentiation, curvature-related Riemann's symbols and properties, differential quadratic forms of classes zero and one, and intrinsic geometry. The final section focuses on physical applications, covering gravitational equations and general relativity.

## Book Information

Series: Dover Books on Mathematics

Paperback: 480 pages

Publisher: Dover Publications; Revised edition (April 17, 2013)

Language: English

ISBN-10: 0486634019

ISBN-13: 978-0486634012

Product Dimensions: 5.7 x 0.9 x 8.2 inches

Shipping Weight: 1.1 pounds (View shipping rates and policies)

Average Customer Review: 4.6 out of 5 stars (See all reviews) (5 customer reviews)

Best Sellers Rank: #808,314 in Books (See Top 100 in Books) #62 in Books > Science & Math > Mathematics > Applied > Vector Analysis #1754 in Books > Science & Math > Mathematics > Pure Mathematics > Calculus

## Customer Reviews

A must have for all physics majors. Excellent outside source for mechanics, especially upper-division.

Not quite a page-turner, but this book presents good applications of tensor math. Sometimes difficult to follow, the book omits many "assumed" steps. However, a fine escape into the world of absolute differential calculus.

This book constitutes the history of Absolute Differential Calculus, born from the cooperation from Albert Einstein and Tullio Levi Civita. It also keeps an account on what Gregorio Ricci Curbastro had previously established on Tensors. I think it's a wonderful occasion, to study from the original papers of the authors of a theory, though they are generally somehow obscure, with respect to textbooks. This is definitely a great book.

This is the tough math you would like to have mastered in college. I am slowly working through this to try to stretch myself. It is slow going and demands a lot from the reader -- at least for me.

The challenge of my mind is here.

[Download to continue reading...](#)

The Absolute Differential Calculus (Calculus of Tensors) (Dover Books on Mathematics) Tensors, Differential Forms, and Variational Principles (Dover Books on Mathematics) Vectors, Tensors and the Basic Equations of Fluid Mechanics (Dover Books on Mathematics) Transformations Of Coordinates, Vectors, Matrices And Tensors Part I: LAGRANGE'S EQUATIONS, HAMILTON'S EQUATIONS, SPECIAL THEORY OF RELATIVITY AND CALCULUS ... Mathematics From 0 And 1 Book 16) An Introduction to Ordinary Differential Equations (Dover Books on Mathematics) A Second Course in Elementary Differential Equations (Dover Books on Mathematics) An Introduction to Differential Equations and Their Applications (Dover Books on Mathematics) Differential Geometry (Dover Books on Mathematics) Differential Geometry of Curves and Surfaces: Revised and Updated Second Edition (Dover Books on Mathematics) Ordinary Differential Equations (Dover Books on Mathematics) Dictionary of Analysis, Calculus, and Differential Equations (Comprehensive Dictionary of Mathematics) Tensor Calculus: A Concise Course (Dover Books on Mathematics) Modern Calculus and Analytic Geometry (Dover Books on Mathematics) Differential Equations and Boundary Value Problems: Computing and Modeling (5th Edition) (Edwards/Penney/Calvis Differential Equations) Ferri's Differential Diagnosis: A Practical Guide to the Differential Diagnosis of Symptoms, Signs, and Clinical Disorders, 2e (Ferri's Medical Solutions) Differential Equations: Computing and Modeling (5th Edition) (Edwards/Penney/Calvis Differential Equations) Fundamentals of Differential Equations (8th Edition) (Featured Titles for Differential Equations) Applied Partial Differential Equations with Fourier Series and Boundary Value Problems (5th Edition) (Featured Titles for Partial Differential Equations) Fundamentals of Differential Equations and Boundary Value Problems (6th Edition) (Featured Titles for Differential Equations) Student Solutions Manual for Differential Equations: Computing and Modeling and Differential Equations and

## Boundary Value Problems: Computing and Modeling

[Dmca](#)