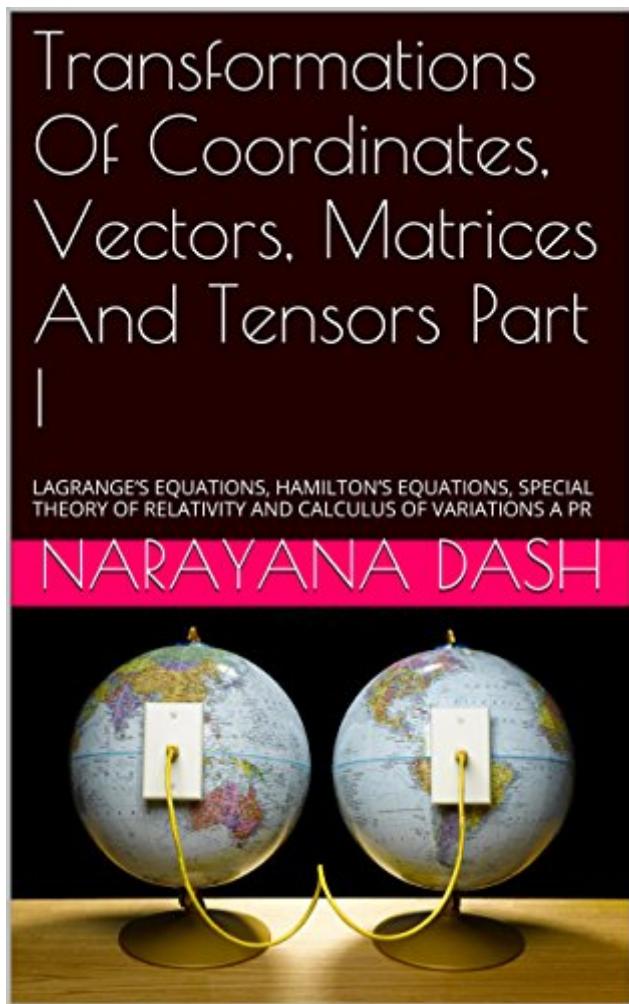


The book was found

# **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)**





## Synopsis

The book contains fundamentals of transformations of coordinates, introduces different orthogonal coordinate systems and their transformations. Transformations of coordinates are fundamental to the understanding of vectors, tensors, coordinate geometry, mechanics, electromagnetics, quantum mechanics and theory of relativity. An interesting example from conic sections is included..Most of the problems are either solved or with suggestions sufficient for self study. The book is with an intention to build confidence in the student along with laying ground work. This book is planned to branch away to different directions, one, tensors and another , mechanics, which shall include Maxwellâ™s equations in electrodynamics and equations of special and general relativity and some equations of quantum mechanics. Still in another direction it would lead to calculus of variation and differential equations in Mathematics. Variational techniques are demonstrated in generalized coordinates to derive Eulerâ™s equations, Lagrangeâ™s equation, Hamiltonâ™s equations, which are applied to various branches of Physics such as mechanics, electromagnetism, optics, wave physics, quantum mechanics and relativity. The book Matrices and Determinants and the book Vector Spaces and Linear Spaces by the same author are appended for a complete preparatory for quantum mechanics. The next volume is planned to include transformations of vectors, matrices, dyadic and tensors , scattering, spherical and cylindrical harmonics, elliptic integrals, virial theorem, Cayley- Klein Parameters, Coriolis force, Lagrangeâ™s and Poissonâ™s brackets, action angle variables, Hamilton â“ Jacobi theory for a preparatory course for study of special theory of relativity and general theory of relativity, field theory and classical and quantum mechanics launched from the same platform of mathematics. Mistakes in the book, and viewing problems may be mailed to the author at [ny\\_n\\_3@rediffmail.com](mailto:ny_n_3@rediffmail.com) and shall be received with gratitude. Suggestions for improvement are also most cordially invited. The author is completely at your disposal for any help in understanding the theory or any of the problems for free; but a weekâ™s time is required for response. The book has been verified with a good preview with e-ink paper-white. Please report any viewing problems at once. Sincerely, narayanadash, 08-12-2014

## Book Information

File Size: 17682 KB

Print Length: 415 pages

Publisher: narayanadash; 1 edition (December 6, 2014)

Publication Date: December 6, 2014

Sold by:Â Digital Services LLC

Language: English

ASIN: B00QOZBNAG

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Enabled

Best Sellers Rank: #635,981 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #9 in Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Transformations #27 in Books > Science & Math > Mathematics > Transformations #247 in Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Pure Mathematics > Calculus

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

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) Vectors, Tensors and the Basic Equations of Fluid Mechanics (Dover Books on Mathematics) Einstein in Matrix Form: Exact Derivation of the Theory of Special and General Relativity without Tensors (Graduate Texts in Physics) The Absolute Differential Calculus (Calculus of Tensors) (Dover Books on Mathematics) Matrices and Linear Transformations: Second Edition (Dover Books on Mathematics) Matrices and Transformations (Dover Books on Mathematics) Witch on First: A Jinx Hamilton Mystery Book 4 (The Jinx Hamilton Mysteries) Witch at Heart: A Jinx Hamilton Witch Mystery Book 1 (The Jinx Hamilton Mysteries) Witch at Odds: A Jinx Hamilton Mystery Book 2 (The Jinx Hamilton Mysteries) Witch at Last: A Jinx Hamilton Mystery Book 3 (The Jinx Hamilton Mysteries) Introduction to Vectors and Tensors Volume 1: Linear and Multilinear Algebra (Mathematical Concepts and Methods in Science and Engineering) Structural Geology Algorithms: Vectors and Tensors A Student's Guide to Vectors and Tensors Calculus with Vectors (Springer Undergraduate Texts in Mathematics and Technology) The Ark of Mathematics Part 3: Proving Vectors and Vector Products Create Rectangular Coordinates: Step by Step Guide (Surveying Mathematics Made Simple) Inverse Between Rectangular Coordinates: Step by Step Guide (Surveying Mathematics Made Simple) (Volume 3) Relativity: The Special and the General Theory Theoretical Physics 4: Special Theory of Relativity Calculus: Early Vectors, Preliminary Edition

[Dmca](#)