1. Record Nr. UNINA9910453025403321 Autore Dray Tevian Titolo The geometry of special relativity / / Tevian Dray Boca Raton:,: CRC Press,, 2012 Pubbl/distr/stampa **ISBN** 0-429-08655-5 1-4665-1048-X Descrizione fisica 1 online resource (148 p.) 530.11 Disciplina Special relativity (Physics) Soggetti Space and time - Mathematical models Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali An AK Peters book. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Front Cover; Contents; List of Figures and Tables; Preface; Acknowledgments; 1. Introduction; 2. The Physics of Special Relativity; 3. Circle Geometry; 4. Hyperbola Geometry; 5. The Geometry of Special Relativity; 6. Applications; 7. Problems I; 8. Paradoxes; 9. Relativistic Mechanics; 10. Problems II; 11. Relativistic Electromagnetism; 12. Problems III; 13. Beyond Special Relativity; 14. Hyperbolic Geometry; 15. Calculus; Bibliography

Sommario/riassunto

The Geometry of Special Relativity provides an introduction to special relativity that encourages readers to see beyond the formulas to the deeper geometric structure. The text treats the geometry of hyperbolas as the key to understanding special relativity. This approach replaces the ubiquitous I symbol of most standard treatments with the appropriate hyperbolic trigonometric functions. In most cases, this not only simplifies the appearance of the formulas, but also emphasizes their geometric content in such a way as to make them almost obvious. Furthermore, many important relations, includin