Record Nr. UNISA996418254403316 Autore Baltus Christopher Titolo Collineations and Conic Sections [[electronic resource]]: An Introduction to Projective Geometry in its History / / by Christopher Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 **ISBN** 3-030-46287-0 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (XI, 187 p.) Disciplina 516.5 Soggetti Projective geometry Mathematics History Projective Geometry History of Mathematical Sciences Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Preface -- 1. Introduction -- 2. Central Collineations -- 3. The Geometry of Euclid's Elements -- 4. Conics in Greek Geometry -- 5. Conic Sections in Early Modern Europe -- 6. Conic Sections in Early Modern Europe -- 7. Central Collineations -- 8. Nineteenth Century --9. Foci -- 10. Steiner. 11. Desargues and Involution -- 12. Looking Ahead -- 13. Matrices and Homogeneous Coordinates -- 14. Some Applications of Conics in History -- 15. Vertical Stretch and Isaac Newton's Conics -- 16. Three Appendices -- Bibliography. Sommario/riassunto This volume combines an introduction to central collineations with an introduction to projective geometry, set in its historical context and aiming to provide the reader with a general history through the middle of the nineteenth century. Topics covered include but are not limited to: The Projective Plane and Central Collineations The Geometry of Euclid's Elements Conic Sections in Early Modern Europe Applications of Conics in History With rare exception, the only prior knowledge

required is a background in high school geometry. As a proof-based treatment, this monograph will be of interest to those who enjoy logical

thinking, and could also be used in a geometry course that emphasizes projective geometry.