1. Record Nr. UNINA9910254086003321

Autore	De Risi Vincenzo
Titolo	Leibniz on the Parallel Postulate and the Foundations of Geometry : The Unpublished Manuscripts / / by Vincenzo De Risi
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2016
ISBN	3-319-19863-7
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (199 p.)
Collana	Science Networks. Historical Studies, , 1421-6329 ; ; 51
Disciplina	510
Soggetti	Mathematics History Geometry Philosophy History of Mathematical Sciences History of Philosophy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1.Introduction -- 2.The Theory of Parallel Lines in the Age of Leibniz -- 3.Leibniz' Epistemology of Geometry and the Parallel Postulate -- 4. Leibniz' Attempts to prove the Parallel Postulate -- 5.Reception and Legacy -- Leibniz' Texts on Parallel Lines -- Bibliography.
Sommario/riassunto	This book offers a general introduction to the geometrical studies of Gottfried Wilhelm Leibniz (1646-1716) and his mathematical epistemology. In particular, it focuses on his theory of parallel lines and his attempts to prove the famous Parallel Postulate. Furthermore it explains the role that Leibniz's work played in the development of non-Euclidean geometry. The first part is an overview of his epistemology of geometry and a few of his geometrical findings, which puts them in the context of the seventeenth-century studies on the foundations of geometry. It also provides a detailed mathematical and philosophical commentary on his writings on the theory of parallels, and discusses how they were received in the eighteenth century as well as their relevance for the non-Euclidean revolution in mathematics. The second part offers a collection of Leibniz's essays on the theory of parallels

	and an English translation of them. While a few of these papers have already been published (in Latin) in the standard Leibniz editions, most of them are transcribed from Leibniz's manuscripts written in Hannover, and published here for the first time. The book provides new material on the history of non-Euclidean geometry, stressing the previously neglected role of Leibniz in these developments. This volume will be of interest to historians in mathematics, philosophy or logic, as well as mathematicians interested in non-Euclidean geometry.

2.

Record Nr.	UNINA9911015968203321
Autore	Barletta Elisabetta
Titolo	Differential Geometry : Advanced Topics in Cauchy-Riemann and Pseudohermitian Geometry (Book I-D) / / by Elisabetta Barletta, Sorin Dragomir, Mohammad Hasan Shahid, Falleh R. Al-Solamy
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	981-9650-73-9
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (695 pages)
Collana	Infosys Science Foundation Series in Mathematical Sciences, , 2364-4044
Altri autori (Persone)	DragomirSorin ShahidMohammad Hasan Al-SolamyFalleh R
Disciplina	516.36
Soggetti	Geometry, Differential Global analysis (Mathematics) Manifolds (Mathematics) Differential Geometry Global Analysis and Analysis on Manifolds
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Pseudohermitian geometry -- CR manifolds with boundary -- Jacobi fields of the Tanaka-Webster connection -- CR immersions and Lorentzian geometry -- Proper holomorphic maps in harmonic map theory -- Beltrami equations on Rossi sphere -- CR immersions.
Sommario/riassunto	This book, Differential Geometry: Advanced Topics in CR and

Pseudohermitian Geometry (Book I-D), is the fourth in a series of four books presenting a choice of advanced topics in Cauchy–Riemann (CR) and pseudohermitian geometry, such as Fefferman metrics, global behavior of tangential CR equations, Rossi spheres, the CR Yamabe problem on a CR manifold-with-boundary, Jacobi fields of the Tanaka–Webster connection, the theory of CR immersions versus Lorentzian geometry. The book also discusses boundary values of proper holomorphic maps of balls, Beltrami equations on Rossi spheres within the Koranyi–Reimann theory of quasiconformal mappings of CR manifolds, and pseudohermitian analogs to the Gauss–Ricci–Codazzi equations in the study of CR immersions between strictly pseudoconvex CR manifolds. The other three books of the series are: Differential Geometry: Manifolds, Bundles, Characteristic Classes (Book I-A) Differential Geometry: Riemannian Geometry and Isometric Immersions (Book I-B) Differential Geometry: Foundations of Cauchy–Riemann and Pseudohermitian Geometry (Book I-C) The four books belong to an ampler book project, “Differential Geometry, Partial Differential Equations, and Mathematical Physics”, by the same authors and aim to demonstrate how certain portions of differential geometry (DG) and the theory of partial differential equations (PDEs) apply to general relativity and (quantum) gravity theory. These books supply some of the ad hoc DG and PDEs machinery yet do not constitute a comprehensive treatise on DG or PDEs, but rather authors’ choice based on their scientific (mathematical and physical) interests. These are centered around the theory of immersions—isometric, holomorphic, and CR—and pseudohermitian geometry, as devised by Sidney Martin Webster for the study of nondegenerate CR structures, themselves a DG manifestation of the tangential CR equations.