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Autore	López Rafael
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Formato	Materiale a stampa
Livello bibliografico	Monografia
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Nota di contenuto	Introduction -- Surfaces with Constant Mean Curvature -- Constant Mean Curvature Embedded Surfaces -- The Flux Formula for Constant Mean Curvature Surfaces -- The Area and the Volume of a Constant Mean Curvature Surface -- Constant Mean Curvature Discs with Circular Boundary -- The Dirichlet Problem of the CMC Equation -- The Dirichlet Problem in Unbounded Domains -- Constant Mean Curvature Surfaces in Hyperbolic Space -- The Dirichlet Problem in Hyperbolic Space -- Constant Mean Curvature Surfaces in Lorentz-Minkowski Space -- Appendix: A. The Variation Formula of the Area and the Volume -- B. Open Questions -- References.
Sommario/riassunto	The study of surfaces with constant mean curvature (CMC) is one of the main topics in classical differential geometry. Moreover, CMC surfaces are important mathematical models for the physics of interfaces in the absence of gravity, where they separate two different media, or for capillary phenomena. Further, as most techniques used in the theory of CMC surfaces not only involve geometric methods but also PDE and complex analysis, the theory is also of great interest for many other mathematical fields. While minimal surfaces and CMC surfaces in general have already been treated in the literature, the present work is the first to present a comprehensive study of “compact surfaces with boundaries,” narrowing its focus to a geometric view. Basic issues include the discussion whether the symmetries of the curve inherit to

	the surface; the possible values of the mean curvature, area and volume; stability; the circular boundary case; and the existence of the Plateau problem in the non-parametric case. The exposition provides an outlook on recent research but also a set of techniques that allows the results to be expanded to other ambient spaces. Throughout the text, numerous illustrations clarify the results and their proofs. The book is intended for graduate students and researchers in the field of differential geometry and especially theory of surfaces, including geometric analysis and geometric PDEs. It guides readers up to the state-of-the-art of the theory and introduces them to interesting open problems.

2.

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Autore	Venditti, Mario
Titolo	La via del Cielo : (quasi favola) / Mario Venditti
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