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	Titolo	A Guide to the Classification Theorem for Compact Surfaces / / by Jean Gallier, Dianna Xu
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	ISBN	3-642-34364-3
	Edizione	[1st ed. 2013.]
	Descrizione fisica	1 online resource (182 p.)
	Collana	Geometry and Computing, , 1866-6795
	Disciplina	512.55
	Soggetti	Topology
		Manifolds (Mathematics)
		Complex manifolds
		Algebraic topology
		Manifolds and Cell Complexes (incl. Diff.Topology)
		Algebraic Topology
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di contenuto	The Classification Theorem: Informal Presentation -- Surfaces -- Simplices, Complexes, and Triangulations -- The Fundamental Group, Orientability -- Homology Groups -- The Classification Theorem for Compact Surfaces -- Viewing the Real Projective Plane in R3 -- Proof of Proposition 5.1 -- Topological Preliminaries -- History of the Classification Theorem -- Every Surface Can be Triangulated -- Notes .
	Sommario/riassunto	This welcome boon for students of algebraic topology cuts a much-needed central path between other texts whose treatment of the classification theorem for compact surfaces is either too formalized and complex for those without detailed background knowledge, or too informal to afford students a comprehensive insight into the subject. Its dedicated, student-centred approach details a near-complete proof of this theorem, widely admired for its efficacy and formal beauty. The authors present the technical tools needed to deploy the method effectively as well as demonstrating their use in a clearly structured, worked example. Ideal for students whose mastery of algebraic topology may be a work-in-progress, the text introduces key notions

such as fundamental groups, homology groups, and the Euler-Poincaré characteristic. These prerequisites are the subject of detailed appendices that enable focused, discrete learning where it is required, without interrupting the carefully planned structure of the core exposition. Gently guiding readers through the principles, theory, and applications of the classification theorem, the authors aim to foster genuine confidence in its use and in so doing encourage readers to move on to a deeper exploration of the versatile and valuable techniques available in algebraic topology.