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	Titolo	From Groups to Categorial Algebra : Introduction to Protomodular and Mal'tsev Categories / / by Dominique Bourn
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	ISBN	3-319-57219-9
	Edizione	[1st ed. 2017.]
	Descrizione fisica	1 online resource (XII, 106 p.)
	Collana	Compact Textbooks in Mathematics, , 2296-4568
	Disciplina	512.2
	Soggetti	Algebra Category theory (Mathematics) Homological algebra General Algebraic Systems Category Theory, Homological Algebra
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Basic concepts in category theory -- Internal structures -- Four basic facts in Algebra -- Unital and protomodular categories -- Regular and homological categories -- Linear and additive categories -- Mal'tsev, naturally Mal'tsev categories.
	Sommario/riassunto	This book gives a thorough and entirely self-contained, in-depth introduction to a specific approach to group theory, in a large sense of that word. The focus lie on the relationships which a group may have with other groups, via "universal properties", a view on that group "from the outside". This method of categorical algebra, is actually not limited to the study of groups alone, but applies equally well to other similar categories of algebraic objects. By introducing protomodular categories and Mal'tsev categories, which form a larger class, the structural properties of the category Gp of groups, show how they emerge from four very basic observations about the algebraic litteral calculus and how, studied for themselves at the conceptual categorical level, they lead to the main striking features of the category Gp of groups. Hardly any previous knowledge of category theory is assumed, and just a little experience with standard algebraic structures such as

groups and monoids. Examples and exercises help understanding the basic definitions and results throughout the text. .