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	Titolo	Linear Models and Design / / by Jay H. Beder
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
	ISBN	9783031081767
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	Edizione	[1st ed. 2022.]
	Descrizione fisica	1 online resource (358 pages)
	Disciplina	519.5
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	Soggetti	Statistics
		Experimental design
		Biometry
		Statistical Theory and Methods
		Design of Experiments
		Biostatistics
		Models lineals (Estadística)
		Llibres electrònics
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references and index.
	Sommario/riassunto	This book is designed as a textbook for graduate students and as a resource for researchers seeking a thorough mathematical treatment of its subject. It develops the main results of regression and the analysis of variance, as well as the central results on confounded and fractional factorial experiments. Matrix theory is deemphasized; its role is taken instead by the theory of linear transformations between vector spaces. The text gives a carefully paced and unified presentation of two topics, linear models and experimental design. Students are assumed to have a solid background in linear algebra, basic knowledge of regression and analysis of variance, and some exposure to experimental design, and should be comfortable with reading and constructing mathematical proofs. The book leads students into the mathematical theory,

including many examples both for motivation and for illustration. Over 130 exercises of varying difficulty are included. An extensive mathematical appendix and a detailed index make the text especially accessible. Linear Models and Design can serve as a textbook for a year-long course in the topics covered, or for a one-semester course in either linear model theory or experimental design. It prepares students for more advanced topics in the field, and assists in developing a thoughtful approach to the existing literature. It includes a guide to terminology as well as discussion of the history and development of ideas, and offers a fresh perspective on the fundamental concepts and results of the subject.