

1. Record Nr.	UNINA9911015684303321
Autore	Tutz Gerhard
Titolo	A Short Guide to Item Response Theory Models / / by Gerhard Tutz
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	9783031872716
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (369 pages)
Collana	Statistics for Social and Behavioral Sciences, , 2199-7365
Disciplina	519.5
Soggetti	Statistics Psychometrics Social sciences - Statistical methods Statistical Theory and Methods Statistics in Social Sciences, Humanities, Law, Education, Behavioral Sciences, Public Policy Applied Statistics Estadística Psicometria Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Introduction -- The Binary Rasch Model -- Extensions of the Rasch Model and Alternative Binary Models -- Ordinal Models -- Extended Ordinal Models Accounting for Response Styles -- The Thresholds Model a Common Framework for Discrete and Continuous Responses -- Classical Test Theory -- Response Models for Count Data -- Tree-Based Item Response Models -- Differential Item Functioning -- Explanatory Item Response Models -- R Packages -- Examples -- Bibliography.
Sommario/riassunto	This book presents foundational concepts, essential principles, and practical applications of Item Response Theory (IRT). It provides a structured survey of diverse models that have been put forth, emphasizing both their differences and commonalities. The main focus is on modern latent trait theory models which provide measurement tools that clearly separate between person abilities and item

parameters. The topics covered include the binary Rasch model, its extensions and alternative binary models, ordinal models and their extensions that account for response styles, the thresholds model, classical test theory, response models for count data, differential item functioning, and explanatory item response models. Tree-based item response models, typically not found in classical IRT textbooks, are also addressed. Applications of the models are illustrated on several data sets from differing areas, showing how models can be fitted and compared. All examples have been computed using R. Code snippets are provided, and the full R code for most of the examples is available online. The book is aimed at graduate students, applied statisticians, and researchers working in psychometrics, educators, and anyone curious about modeling strategies that enhance the precision and validity of their measurement tools. It serves as an introductory guide for beginners while also providing a resource for those seeking an overview of the plethora of available IRT models.
