1. Record Nr. UNINA9910874686703321

Autore	Hans-Gill R. J
Titolo	Lecture Notes on Geometry of Numbers / / by R. J. Hans-Gill, Madhu Raka, Ranjeet Sehmi
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819996025 9789819996018
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (212 pages)
Collana	University Texts in the Mathematical Sciences, , 2731-9326
Altri autori (Persone)	RakaMadhu SehmiRanjeet
Disciplina	512.75
Soggetti	Number theory Algebraic geometry Number Theory Algebraic Geometry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Preliminaries -- 2. Minkowski's Fundamental Theorem and its Applications -- 3. Lattices -- 4. Minima of Positive De nite Quadratic Forms -- 5. Critical Determinant -- 6. Successive Minima -- 7. Packings Density -- 8. Coverings -- 9. Homogeneous Minimum -- 10. Inhomogeneous Problems.
Sommario/riassunto	This book serves as an illuminating introduction to the intricacies of the geometry of numbers. It commences by exploring basic concepts of convex sets and lattices in Euclidean space and goes on to delve into Minkowski’s fundamental theorem for convex bodies and its applications. It discusses critical determinants and successive minima before explaining the core results of packings and coverings. The text goes on to delve into the significance of renowned conjectures such as Minkowski’s conjecture regarding the product of linear forms, Watson’s conjecture, and the conjecture of Bambah, Dumir, and Hans-Gill concerning non-homogeneous minima of indefinite quadratic forms. Dedicated to Prof. R.P. Bambah on his 98th birthday, a living legend of number theory in India, this comprehensive book addresses both homogeneous and non-homogeneous problems, while sprinkling in

historical insights and highlighting unresolved questions in the field. It is ideally suited for beginners embarking on self-study as well as for use as a text for a one- or two-semester introductory course. .