Record Nr. UNISALENTO991002954139707536 Autore Alonso-Gutiérrez, David Titolo Approaching the Kannan-Lovász-Simonovits and variance conjectures / David Alonso-Gutiérrez, Jesús Bastero Cham: Springer, 2015 Pubbl/distr/stampa **ISBN** 9783319132624 Descrizione fisica x, 148 p.; 24 cm Collana Lecture notes in mathematics, 0075-8434; 2131 Classificazione AMS 46-02 AMS 28A AMS 46B25 AMS 52A22 AMS 60D05 Bastero, Jesúsauthor Altri autori (Persone) Disciplina 515.1 Soggetti Functional analysis Geometric analysis Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index Nota di contenuto The conjectures; Main examples; Relating the conjectures; Appendix; Index Sommario/riassunto Focusing on two central conjectures from the field of Asymptotic Geometric Analysis, the Kannan-Lovász-Simonovits spectral gap conjecture and the variance conjecture, these Lecture Notes present the theory in an accessible way, so that interested readers, even those who are not experts in the field, will be able to appreciate the topics treated. Employing a style suitable for professionals with little background in analysis, geometry or probability, the work goes directly to the connection between isoperimetric-type inequalities and functional inequalities, allowing readers to quickly access the core of these conjectures. In addition, four recent and important results concerning this theory are presented. The first two are theorems attributed to Eldan-Klartag and Ball-Nguyen, which relate the variance and the KLS

conjectures, respectively, to the hyperplane conjecture. The remaining two present in detail the main ideas needed to prove the best known estimate for the thin-shell width given by Guédon-Milman, and an approach to Eldan?s work on the connection between the thin-shell