1. Record Nr. UNINA9910887878303321 Autore Shi Minwei Titolo Stochastic Geometry Analysis of Space-Air-Ground Networks / / by Minwei Shi, Kai Yang, He Zhou Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 981-9762-66-9 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (131 pages) Altri autori (Persone) YangKai ZhouHe Disciplina 621.384 Soggetti Wireless communication systems Mobile communication systems **Telecommunication** Communication Wireless and Mobile Communication Communications Engineering, Networks Media and Communication Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- Fundamentals of Wireless Network Analysis --Terrestrial Cellular Networks with Dependence -- Unmanned Aerial Vehicle-Assisted Cellular Networks -- Low Earth Orbit Satellite Networks -- Summary and Discussion. Sommario/riassunto This book presents a comprehensive framework for the theoretical analysis of space-air-ground networks using stochastic geometry. This analytical approach is indispensable for evaluating the performance of large-scale space-air-ground networks, which serve as critical facilitators for the advancement of the sixth-generation wireless communication aimed at providing high-speed broadband coverage for remote areas. By incorporating the features of topology and channel model in different tiers, this book investigates the key performance metrics in terms of load balancing, coverage assessment, and mobility

management. The developed mechanisms provide effective design insights for space-air-ground networks while obviating the need for

complex system-level simulations.