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FORMULAS FOR RANDOM FIELDS; 6.1 Random Fields from  $R(d)$  to  $R(d)$ ; 6.2 Random Fields from  $R(d)$  to  $R(d)$ ,  $d > d$ ; Exercises  
 7 REGULARITY OF THE DISTRIBUTION OF THE MAXIMUM 7.1 Implicit Formula for the Density of the Maximum; 7.2 One-Parameter Processes; 7.3 Continuity of the Density of the Maximum of Random Fields; Exercises; 8 THE TAIL OF THE DISTRIBUTION OF THE MAXIMUM; 8.1 One-Dimensional Parameter: Asymptotic Behavior of the Derivatives of  $F(M)$ ; 8.2 An Application to Unbounded Processes; 8.3 A General Bound for  $p(M)$ ; 8.4 Computing  $(x)$  for Stationary Isotropic Gaussian Fields; 8.5 Asymptotics as  $x \rightarrow +\infty$ ; 8.6 Examples; Exercises; 9 THE RECORD METHOD; 9.1 Smooth Processes with One-Dimensional Parameters  
 9.2 Nonsmooth Gaussian Processes 9.3 Two-Parameter Gaussian Processes; Exercises; 10 ASYMPTOTIC METHODS FOR AN INFINITE TIME HORIZON; 10.1 Poisson Character of High Up-Crossings; 10.2 Central Limit Theorem for Nonlinear Functionals; Exercises; 11 GEOMETRIC CHARACTERISTICS OF RANDOM SEA WAVES; 11.1 Gaussian Model for an Infinitely Deep Sea; 11.2 Some Geometric Characteristics of Waves; 11.3 Level Curves, Crests, and Velocities for Space Waves; 11.4 Real Data; 11.5 Generalizations of the Gaussian Model; Exercises; 12 SYSTEMS OF RANDOM EQUATIONS; 12.1 The Shub-Smale Model 12.2 More General Models 12.3 Noncentered Systems (Smoothed Analysis); 12.4 Systems Having a Law Invariant Under Orthogonal Transformations and Translations; 13 RANDOM FIELDS AND CONDITION NUMBERS OF RANDOM MATRICES; 13.1 Condition Numbers of Non-Gaussian Matrices; 13.2 Condition Numbers of Centered Gaussian Matrices; 13.3 Noncentered Gaussian Matrices; REFERENCES AND SUGGESTED READING; NOTATION; INDEX

## Sommario/riassunto

A timely and comprehensive treatment of random field theory with applications across diverse areas of study Level Sets and Extrema of Random Processes and Fields discusses how to understand the properties of the level sets of paths as well as how to compute the probability distribution of its extremal values, which are two general classes of problems that arise in the study of random processes and fields and in related applications. This book provides a unified and accessible approach to these two topics and their relationship to classical theory and Gaussian processes and fields, and the mo