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Nota di contenuto	Handbook of Graphs and Networks From the Genome to the Internet; Preface; Contents; List of contributors; 1 Mathematical results on scale-free random graphs; 1.1 Introduction; 1.2 Classical models of random graphs; 1.3 Results for classical random graphs; 1.4 The Watts-Strogatz 'small-world' model; 1.5 Scale-free models; 1.6 The Barabasi-Albert model; 1.7 The LCD model and G((n))(m); 1.8 The Buckley-Osthus model; 1.9 The copying model; 1.10 The Cooper-Frieze model; 1.11 Directed scale-free graphs; 1.12 Clustering coefficient and small subgraphs 1.13 Pairings on [0, 1] and the diameter of the LCD model1.14 Robustness and vulnerability; 1.15 The case [0, 1]: plane-oriented recursive trees; 1.16 Conclusion; References; 2 Random graphs as models of networks; 2.1 Introduction; 2.2 Random graphs with specified degree distributions; 2.3 Probability generating functions;

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Sommario/riassunto

Complex interacting networks are observed in systems from such diverse areas as physics, biology, economics, ecology, and computer science. For example, economic or social interactions often organize themselves in complex network structures. Similar phenomena are observed in traffic flow and in communication networks as the internet. In current problems of the Biosciences, prominent examples are protein networks in the living cell, as well as molecular networks in the genome. On larger scales one finds networks of cells as in neural networks, up to the scale of organisms in ecological food web