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5.5 Copying models; 5.6 Fitness based model
5.7 Graph from optimization principlesII: EXAMPLES; 6. Networks in the cell; 6.1 Basic cell biology; 6.2 Protein-protein interaction network; 6.3 Metabolic pathways; 6.4 Gene regulatory networks; 7. Geophysical networks; 7.1 Satellite images and digital elevation models; 7.2 Geometrical scale invariance for river networks; 7.3 Scaling relations for river networks; 7.4 River networks models; 7.5 River networks on Mars' surface; 8. Ecological networks; 8.1 Species and evolution; 8.2 Food webs: a very particular case of network; 8.3 Food web quantities; 8.4 Classifications of species
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BC; D; E; F; G; H; I; L; M; N; O; P; R; S; T; V; W; B. Graph quantities; B.1 Basics; B.2 Different kinds of graphs; B.3 Paths, cycles, and trees; C. Basic statistics; C.1 Events and probability; C.2 Probability densities and distributions; C.3 Working with statistical distributions; C.4 Statistical properties of weighted networks; D. Matrices and eigenvectors; E. Population dynamics; E.1 Population dynamics; Bibliography; Index; A; B; C; D; E; F; G; H; I; K; L; M; N; O; P; R; S; T; V; W; Y; Z

Sommario/riassunto

Many different systems both in nature and in technology can be described by means of networks of interconnected components. Despite their different aspects, all of them share similar mathematical properties. In this book we explain how to recognize these features and why these different systems develop this common structure. - ;A variety of different social, natural and technological systems can be described by the same mathematical framework. This holds from the Internet to food webs and to boards of company directors. In all these situations a graph of the elements of the system and their in