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Sommario/riassunto	This book is the first general and extensive review on the algorithmics and mathematical results of beyond planar graphs. Most real-world data sets are relational and can be modelled as graphs consisting of vertices and edges. Planar graphs are fundamental for both graph theory and graph algorithms and are extensively studied. Structural properties and fundamental algorithms for planar graphs have been discovered. However, most real-world graphs, such as social networks and biological networks, are non-planar. To analyze and visualize such real-world networks, it is necessary to solve fundamental mathematical and algorithmic research questions on sparse non-planar graphs, called beyond planar graphs.This book is based on the National Institute of Informatics (NII) Shonan Meeting on algorithmics on beyond planar graphs held in Japan in November, 2016. The book consists of 13 chapters that represent recent advances in various areas of beyond planar graph research. The main aims and objectives of this book include 1) to timely provide a state-of-the-art survey and a

bibliography on beyond planar graphs; 2) to set the research agenda on beyond planar graphs by identifying fundamental research questions and new research directions; and 3) to foster cross-disciplinary research collaboration between computer science (graph drawing and computational geometry) and mathematics (graph theory and combinatorics). New algorithms for beyond planar graphs will be in high demand by practitioners in various application domains to solve complex visualization problems. This book therefore will be a valuable resource for researchers in graph theory, algorithms, and theoretical computer science, and will stimulate further deep scientific investigations into many areas of beyond planar graphs.