# Preface

This book aims to introduce the reader to concepts and methods of user community discovery on the social Web. It does so by presenting the evolution of online user communities from the early days of the Web to the complex online social networks that we have formed today. On this basis it explains how state-of-the-art methods for web community discovery can be adapted to address new challenges. It also presents opportunities for research in the new setting and provides examples of new methods that have appeared in the literature.

The basis for current research on community discovery methods is the early work on Web community discovery. Since the wide adoption of Internet-based services and applications, the users' digital traces on Web sites allowed the segmentation of users into communities of "like-minded" individuals. Such communities supported the provision of personalized services to Web users.

Subsequently, the emergence of online social networks and media sharing services allowed users to post information and media content, and to establish explicit social relations with other users. Detecting communities in this context poses various new challenges, in terms of computational complexity and community representation. It also provides a wealth of new opportunities for discovering truly social groups and facilitating both personalization and social interaction among users.

In this fascinating new environment, the current book emphasizes the complexity and richness of social networks, i.e., networks with multiple types of nodes, and multiple types of relation between their nodes, while also examining the issues of scalability, time, and geolocation. It also touches upon the important issue of user privacy and its relation to community discovery.

The editors would like to acknowledge the high-quality contributions of the authors in this volume, which will make it an important read in the field of social network analysis and data mining. We are also indebted to the reviews provided by researchers and practitioners as they made possible the production of a high-quality volume.

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