



## Advanced Methods for Knowledge Discovery from Complex Data [

Bandyopadhyay, Sanghamitra

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Monografía

Advanced Methods for Knowledge Discovery from Complex Data brings together research articles by active practitioners and leading researchers reporting recent advances in the field of knowledge discovery, where the information is mined from complex data, such as unstructured text from the world-wide web, databases naturally represented as graphs and trees, geoscientific data from satellites and visual images, multimedia data and bioinformatics data. An overview of the field, looking at the issues and challenges involved is followed by coverage of recent trends in data mining, including descriptions of some currently popular tools like genetic algorithms, neural networks and case-based reasoning. This provides the context for the subsequent chapters on methods and applications. Part I is devoted to the foundations of mining different types of complex data like trees, graphs, links and sequences. A knowledge discovery approach based on problem decomposition is also described. Part II presents important applications of advanced mining techniques to data in unconventional and complex domains, such as life sciences, world-wide web, image databases, cyber security and sensor networks. With a good balance of introductory material on the knowledge discovery process, advanced issues and state-of-the-art tools and techniques, as well as recent working applications this book provides a representative selection of the available methods and their evaluation in real domains. It will be useful to students at Masters and PhD level in Computer Science, as well as practitioners in the field. A website supports the book: <http://www.cse.uta.edu/amkdcd>

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Mining of RDF Documents -- Image Retrieval using Visual Features and Relevance Feedback -- Significant Feature Selection Using Computational Intelligent Techniques for Intrusion Detection -- On-board Mining of Data Streams in Sensor Networks -- Discovering Evolutionary Classifier over High Speed Non-static Stream

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